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ANNUAL REPORT  
OF THE  
DEPARTMENT OF SANITATION  
OF THE  
ISTHMIAN CANAL COMMISSION  
FOR THE  
YEAR 1907

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W. C. GORGAS

Assistant Surgeon-General, U. S. Army  
Chief Sanitary Officer

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WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1908

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## • LETTER OF TRANSMITTAL.

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OFFICE OF CHIEF SANITARY OFFICER,  
*Ancon, Canal Zone, February 24, 1908.*

CHAIRMAN ISTHMIAN CANAL COMMISSION,  
*Culebra, Canal Zone.*

SIR: I herewith forward annual report for the calendar year 1907.

We averaged during the year 10,709 white employees, among whom we had 179 deaths, giving us an annual death rate of 16.71 per thousand. Last year, 1906, we had a death rate among our white employees of 16.27 per thousand.

We averaged during 1907, 28,634 negro employees, among whom we had 953 deaths, giving us a rate of 33.28 per thousand. The preceding year, the rate in the same class was 49.01 per thousand. This means that among our negro employees 16 fewer men died in 1907 in every thousand than in 1906.

We averaged during the year 1907, 39,343 employees of all kinds on our rolls. Among these we had 1,132 deaths, giving us a death rate of 28.77 per thousand. The preceding year our death rate in the same class was 41.24 per thousand. This means that in our force taken as a whole we had 13 fewer deaths in every thousand men than we had in 1906; that is, the improvement in the health conditions in the year 1907 over those of 1906 saved the lives of 507 men in our laboring force.

The improvement has also been considerable in the health of the total population. In 1907 our death rate in this class was 33.63 per thousand; in 1906, 49.10 per thousand, showing a saving of 16 lives per thousand over the year 1906. This for the total

population of 102,000 means the saving of 1,632 lives in 1907 as compared with 1906.

Among our 4,300 white American employees we had during the year 42 deaths, which gives a rate per thousand of 9.76. Of these, 29 died from disease, which would give us a death rate from disease of 6.74 per thousand, which is about as small as would occur among a similar body of men in any healthy part of the United States.

We had in Commission quarters the families of these 4,300 men—1,337 women and children. Of these, 9 died, giving a death rate of 6.73 per thousand; smaller, I think, than the death rate in the same class in most parts of the United States. Generally, the death rate of women and children, considered together, is much higher than that of men in the prime of life. In this instance they are almost exactly the same.

Among our 39,000 employees, we had on an average every day 987 sick. This would give us a rate per thousand of 25, which compares very favorably with bodies of men such as our Army or Navy or similar organizations.

During the year we had 173 violent deaths among the employees, as compared with 55 in the preceding year. I can think of no particular reason for this very great increase. There was probably very much more blasting and railroad work going on in 1907 than in 1906.

From beriberi we had 2 deaths among the employees in 1907 as against 6 in 1906. Among the employees in 1907 we had 48 deaths from dysentery as against 69 in the preceding year. From malaria among the employees we had 154 deaths in 1907 as against 233 in 1906. This I think a particularly good showing, as the force was considerably smaller in 1906 than in 1907. From pneumonia among the employees we had 328 deaths this year as against 421 last year.

Taking the population at large and considering individual diseases, we also find some gratifying decreases. From malaria, with a total population of



66,000 in 1906, we had 712 deaths; in 1907, with a total population of 102,000, we had 568 deaths. From dysentery, in 1906, we had 190 deaths. With nearly double the population in 1907 we had only 116 deaths. From beriberi, in 1906 we had 68 deaths; in 1907, 53 deaths. Of these 53 deaths 48 occurred in the city of Panama; that is, beriberi is almost entirely confined to the city of Panama. From pneumonia, for the year 1906, we had 720 deaths; in 1907, 581 deaths. From hook worm, which causes tropical anæmia, we had in 1906, 15 deaths; in 1907, 7 deaths. When we first came to Panama we looked upon this as probably one of the most formidable diseases with which we would have to deal.

It is an interesting fact that of our total mortality, 28.77 per thousand, among our laboring force, only 4.57 per thousand died of disease ordinarily called tropical, among which we include malaria.

Taking malaria itself, we admitted into our hospitals during the year 1906, 21,739 cases; in the year 1907, 16,753 cases. As we had a force of 26,000 in 1906, and of 39,000 in 1907, these figures would show that in 1906 eleven-thirteenths of our force had malaria, while in 1907 only five-thirteenths had this disease; that is, the malaria for the year had been reduced just one-half as compared with 1906.

It is interesting to note in this connection that in 1906 our death rate from malaria was, approximately, among the whites, 2 per thousand, and among the blacks, 8 per thousand. In 1907 the same rates were 3 per thousand and 4 per thousand. This seems to show a greatly increased resisting power among the blacks during 1907, as compared with 1906. The slight increase in death rate from malaria among the whites is due to the fact that the white American force has decreased, and the white foreign force greatly increased. The foreign force, being much less intelligent than the American white force, increased to some extent the mortality among the whites.

It is worthy of note that we admitted to our hospitals during the year only 243 cases of syphilis and 190 cases of gonorrhea. This in so large a force, I think, is quite remarkable. And it is equally remarkable that we should have admitted to our hospitals during the year only 116 cases of alcoholism.

We gave during the year 438,000 days' treatment to employees in hospitals, at a cost for food of \$129,000, which gives us a cost per capita per day of 29.5 cents for food. The total running expenses for all hospitals for this same period was \$735,000, which would give us a total cost per capita, per day, of \$1.677. This compares very favorably, as to expense, with hospitals in the United States, and when we consider that almost all of our supplies are considerably more expensive than in the United States, I think it is doing very well.

During the year we had 71,000 people come to the Isthmus and 44,000 leave, which gives an increase in population of 27,000.

For the year, then, I think we can state that the health conditions on the Isthmus show a marked improvement as compared with all previous years since we have been here, and that this improvement seems to be continuous; that the health of the American whites—men, women, and children—is fully as good as in most parts of the United States; that the working efficiency of our force, as far as loss from sickness is concerned, is as good as that of a similar force anywhere in the United States, and better than that of either our Army or Navy.

We have had no case of yellow fever anywhere on the Isthmus, excepting that taken off the shipping at the quarantine stations; no case of bubonic plague, and only one death from smallpox, which was not in the person of an employee.

Very respectfully,

WM. C. GORGAS,  
*Chief Sanitary Officer.*

# ANNUAL REPORT

OF

## DEPARTMENT OF SANITATION, ISTHMIAN CANAL COMMISSION.

### FOR THE YEAR 1907.

#### GENERAL STATISTICS.

TABLE SHOWING AVERAGE NUMBER FOR THE YEAR OF WHITE AND BLACK EMPLOYEES, SEPARATELY AND CONSOLIDATED, TOTAL DEATHS, AVERAGE POPULATION, TOTAL DEATHS AMONG POPULATION, AND ANNUAL DEATH RATES AMONG EMPLOYEES AND POPULATION.

YEAR 1907.

	Average number of employees.	Total deaths.	Annual average per 1,000.
White employees of the Canal Commission and Panama Railroad Company.....	10, 709	179	16. 71
Black employees of the Canal Commission and Panama Railroad Company.....	28, 634	953	33. 28
Total employees of the Canal Commission and Panama Railroad Company.....	39, 343	1, 132	28. 77
	Average population.		
Panama.....	33, 548	1, 156	34. 45
Colon.....	14, 549	571	39. 24
Canal Zone.....	54, 036	1, 708	31. 60
Total population.....	102, 133	3, 435	33. 63

NOTE.—The population and deaths as given for the cities of Panama and Colon, and for the Canal Zone, in the table above, include employees and civil population. Figures relating to number of employees are compiled from the pay rolls of the different months.

## DEATHS BY COLORS.

White:		
Male.....	480	
Female.....	171	
Black:		
Male.....	1,958	
Female.....	754	
Chinese:		
Male.....	57	
Female.....	2	
Not stated:		
Male.....	5	
Female.....	2	
Sex unknown.....	6	
Total.....	3,435	

## DEATHS BY NATIONALITY.

Algeria.....	1	Grenada.....	7
Africa.....	2	Guadeloupe.....	63
Antigua.....	29	Guiana.....	1
Austria.....	4	Haiti.....	8
Argentine Republic.....	1	Holland.....	1
Arabia.....	1	Honduras.....	1
Barbados.....	377	Hindustan.....	1
Bolivia.....	3	India.....	1
British Guiana.....	1	Ireland.....	2
Bahama Islands.....	1	Italy.....	25
Bohemia.....	1	Jamaica.....	657
Belgium.....	1	Martinique.....	165
Canada.....	1	Mexico.....	14
China.....	58	Montserrat.....	13
Chile.....	3	Norway.....	2
Colombia.....	251	Nicaragua.....	6
Costa Rica.....	11	Nassau.....	2
Cuba.....	7	Panama.....	1,149
Curaçao.....	1	Peru.....	5
Demarara.....	2	Porto Rico.....	4
Dominica.....	8	Portugal.....	2
Egypt.....	1	Russia.....	2
Ecuador.....	6	Syria.....	1
England.....	19	San Salvador.....	4
France.....	31	Scotland.....	6
Fortune Islands.....	10	Spain.....	123
Greece.....	13	Sweden.....	1
Germany.....	7	Switzerland.....	1

St. Kitts.....	4	United States.....	7
St. Lucia.....	84	Venezuela.....	
St. Thomas.....	5	West Indies.....	7
St. Vincent.....	11	Unknown.....	29
St. Michaels.....	1		
Trinidad.....	22	Grand total.....	3,435
Turkey.....	2		

## DEATHS BY AGES.

Under 1 year.....	530	From 60 to 70 years.....	80
From 1 to 4 years.....	118	From 70 to 80 years.....	42
From 4 to 10 years.....	57	From 80 to 90 years.....	16
From 10 to 20 years.....	264	From 90 to 100 years.....	2
From 20 to 30 years.....	853	Over 100 years.....	2
From 30 to 40 years.....	554	Not stated.....	256
From 40 to 50 years.....	443		
From 50 to 60 years.....	218	Grand total.....	3,435

DEATHS OF ISTHMIAN CANAL COMMISSION AND PANAMA RAILROAD  
EMPLOYEES BY NATIONALITY.

Antigua.....	23	Italy.....	11
Austria.....	1	Jamaica.....	223
Bohemia.....	1	Mexico.....	1
Bahama Islands.....	1	Martinique.....	106
Barbados.....	336	Montserrat.....	10
Belgium.....	1	Nicaragua.....	2
Bolivia.....	1	Nassau.....	2
Canada.....	1	Panama.....	52
Colombia.....	33	Porto Rico.....	2
Costa Rica.....	1	Russia.....	1
Curacao.....	1	Syria.....	1
Demarara.....	2	San Salvador.....	1
Dominica.....	6	Scotland.....	2
England.....	8	Spain.....	83
France.....	14	St. Kitts.....	2
Fortune Islands.....	10	St. Lucia.....	27
Germany.....	2	St. Thomas.....	2
Greece.....	11	St. Vincent.....	11
Grenada.....	5	Switzerland.....	1
Guadaloupe.....	53	Trinidad.....	17
Guiana, British.....	1	Turkey.....	2
Haiti.....	4	United States.....	43
Holland.....	1	West Indies.....	3
Hindustan.....	1	Not stated.....	7
India.....	1		
Ireland.....	1	Grand total.....	1,132



CAUSES OF DEATHS OF ISTHMIAN CANAL COMMISSION AND  
PANAMA RAILROAD EMPLOYEES.

	White.	Black.	Total.
Accidental traumatisms.....	55	87	142
Alcoholism, acute.....	5	1	6
Anæmia, pernicious.....	1	0	1
Anæmia.....	1	0	1
Aneurism of abdominal aorta.....	1	0	1
Arthritis, purulent.....	0	1	1
Apoplexy.....	1	3	4
Arterio-sclerosis.....	0	1	1
Abscess of spleen.....	0	1	1
Aortic insufficiency.....	1	0	1
Amœbic abscess of liver.....	2	1	3
Appendicitis, suppurative.....	1	0	1
Aortitis, vegetative.....	0	1	1
Beriberi.....	1	1	2
Biliary calculi.....	0	2	2
Bronchitis.....	0	1	1
Bright's disease.....	0	1	1
Carcinoma of stomach.....	1	0	1
Colitis, acute.....	1	1	2
Diabetes.....	0	1	1
Drowning, accidental.....	5	16	21
Dysentery, amœbic.....	7	15	22
Dysentery.....	4	22	26
Diarrhea.....	0	1	1
Empyema.....	0	4	4
Endocarditis.....	1	2	3
Enteritis, suppurative.....	0	1	1
External violence.....	2	1	3
Embolism.....	0	1	1
Entero-colitis.....	0	1	1
Fever:			
Malarial.....	23	110	133
Pernicious.....	10	3	13
Hæmoglobinuric.....	2	6	8
Typhoid.....	9	89	98
General paresis.....	1	0	1
Hypostatic congestion of lungs.....	0	1	1
Heart, organic disease of.....	3	18	21
Hemorrhage.....	0	3	3
Hernia, strangulated.....	0	1	1
Infection, undetermined.....	0	1	1



CAUSES OF DEATHS OF ISTHMIAN CANAL COMMISSION AND  
PANAMA RAILROAD EMPLOYEES—Continued.

	White.	Black.	Total.
Ileo-colitis:			
Acute.....	1	3	4
Chronic.....	0	1	1
Intestinal obstructions.....	1	4	5
Indigestion, acute.....	0	1	1
Insanity, alcoholic.....	0	1	1
Liver:			
Abscess of.....	1	4	5
Cirrhosis of.....	4	3	7
Lungs:			
Abscess of.....	1	0	1
Gangrene of.....	0	1	1
Oedema of.....	0	1	1
Tuberculosis of.....	6	67	73
Myelitis.....	0	1	1
Malignant tumor of pancreas.....	0	1	1
Meningitis:			
Simple.....	1	13	14
Cerebro-spinal.....	0	5	5
Pneumococcic.....	0	3	3
Tuberculous.....	1	1	2
Myocarditis.....	0	4	4
Nephritis.....	2	56	58
Oedema of larynx.....	0	2	2
Paralysis.....	0	1	1
Pericarditis.....	0	3	3
Peritonitis.....	0	12	12
Pleurisy.....	0	1	1
Pneumonia.....	11	304	315
Broncho.....	2	11	13
Pyemia.....	0	5	5
Rupture of—			
Spleen.....	0	1	1
Urethra.....	0	1	1
Rheumatism.....	0	1	1
Shock from operation.....	0	1	1
Syncope.....	0	1	1
Septicemia.....	6	23	29
Stomach:			
Cancer of.....	0	2	2
Ulcer of.....	1	0	1

CAUSES OF DEATHS OF ISTHMIAN CANAL COMMISSION AND  
PANAMA RAILROAD EMPLOYEES—Continued.

	White.	Black.	Total.
Sarcoma of jaw .....	0	1	1
Suicide.....	0	1	1
Senile debility.....	0	2	2
Syphilis.....	1	2	3
Tetanus.....	1	3	4
Tuberculosis of mesenteric glands.....	0	1	1
Uncinaria.....	0	2	2
Not stated.....	1	3	4
Grand total.....	179	953	1, 132

LIST OF DEATHS ON THE ISTHMUS OF WHITE EMPLOYEES FROM  
THE UNITED STATES, GIVING NAME, OCCUPATION, LENGTH OF  
TIME ON THE ISTHMUS, AGE, AND CAUSE OF DEATH.

JANUARY.

Name.	Occupation.	Time on Isthmus.	Age.	Cause of death.
Fitch, Thomas.....	Panama Railroad.	18 months.	35	Dysentery, amœbic.
Marion, Dennis.....	Machinist.....	(?)	40	Intestinal obstruction.
Pruden, H. D.....	Electrician.....	3 weeks...	29	Fever, typhoid.
Ridley, Geo. V.....	Doctor.....	20 months	30	Pneumonia, lobar.
Wardell, Otis.....	Carpenter.....	3 months.	24	Fever, typhoid.

FEBRUARY.

Horne, W. R.....	Carpenter.....	9 months.	29	Hæmoglobinuric fever.
Newman, Frank...	.....do.....	6 months.	41	Tuberculosis.

MARCH.

Feeney, Michael...	Panama Railroad.	8 months.	(?)	Accidental traumatism.
Fountain, John H..	Conductor.....	3 years....	29	Do.
James, Edward....	Clerk.....	22 months.	40	Septicemia.
Kendal, Thomas...	Engineering department.	4 years....	62	Malarial fever.

LIST OF DEATHS ON THE ISTHMUS OF WHITE EMPLOYEES FROM  
THE UNITED STATES, ETC.—Continued.

APRIL.

Name.	Occupation.	Time on Isthmus.	Age.	Cause of death.
King, S. I.....	Panama Railroad.	7 months.	(?)	Septicemia.
Murphy, Joseph ...	Machinist.....	14 months	37	Blackwater fever.
Rick, August J ....	Foreman.....	1 year.....	46	Septicemia.

MAY.

Gibson, Charles....	Excavating department.	3 weeks...	(?)	Accidental traumatism.
Hulme, R. A.....	Municipal Engineering department.	(?)	50	Multiple fractures.
Parke, Lyman M...	Watchman.....	(?)	34	Accidental traumatism.

JUNE.

Dempsey, Patrick J.	Powderman.....	6 weeks...	26	Explosion, dynamite.
Loffts, J. J.....	Supervisor.....	2 years....	38	Acute alcoholism.
Maher, Edward....	Transportation department.	3 years....	(?)	Suffocation, traumatism.
Titus, George.....	Foreman.....	11 months	38	Acute alcoholism.

JULY.

Harrington, Jas. W.	Panama Railroad.	9 months.	(?)	Typhoid fever.
Irwin, Earle M....	(?)	(?)	(?)	Accidental drowning.
Karling, James....	Excavating department.	14 months	45	Amœbic dysentery and abscess of liver.
Wallion, Michael...	Engineering.....	(?)	24	Accidental drowning.

AUGUST.

Bragg, Sherman...	Pattern maker....	18 months	39	Organic disease of heart.
Pettit, Geo. L.....	Boiler maker.....	10 weeks..	29	Abscess of liver.
Thornburgh, Eleanor M.	Panama Railroad.	10 months	33	Septicemia.

SEPTEMBER.

Sherman, Jos. L....	Craneman.....	(?)	36	Broncho-pneumonia.
Twist, E. M.....	Panama Railroad.	10½ years..	41	Typhoid fever.

LIST OF DEATHS ON THE ISTHMUS OF WHITE EMPLOYEES FROM  
THE UNITED STATES, ETC.—Continued.

## OCTOBER.

Name.	Occupation.	Time on Isthmus.	Age.	Cause of death.
Farrell, Patrick....	Engineer and conductor.	3 months.	44	Ulcer of stomach.
Savage, John.....	.....do.....	21 months	27	Abscess of liver.
Shean, David.....	Coppersmith.....	25 years...	56	Accidental traumatism.
Snell, Frank.....	Trainman.....	14 months	29	Suppurative appendicitis.
Wagner, Adam....	Blacksmith.....	9 months.	42	Abscess of liver.

## NOVEMBER.

Powers, Edward...	Mechanic.....	10 months	51	Malarial fever, pernicious.
Vande Pool, A. G. ....	.....do.....	8 months.	38	Malaria, E. A.

## DECEMBER.

Conant, Frank W..	Foreman.....	(?)	34	Apoplexy.
Cassidy, Frank....	Machinist.....	(?)	40	Fracture of skull.
Kramer, Philip F..	Engineer.....	2½ years...	(?)	External violence.
Rogers, James S...	Powderman.....	(?)	35	General paresis.
Studevant, B. S...	Municipal Engineering Department.	33 months	30	Accidental drowning

Average number of white employees from the United States on the Isthmus, for the year.....	4,300
Total number of deaths among white employees from the United States for the year.....	42
Annual average, per 1,000, of deaths among white employees from the United States.....	9.76
Total number of deaths from disease, among white employees from the United States, for the year.....	29
Annual average, per 1,000, of deaths from disease among white employees from the United States.....	6.74
Total number of deaths from external violence, poisoning, etc., among white employees from the United States, for the year.....	13
Annual average, per 1,000, of deaths among white employees from the United States, from external violence, poisoning, etc.....	3.02

## DEATHS OF WHITE AMERICAN WOMEN AND CHILDREN.

Name.	Time on Isthmus.	Age.	Cause of death.
	<i>April.</i>		
Little, Katherine L....	8 months...	13	External violence (railroad accident—internal hemorrhage).
	<i>May.</i>		
Warren (infant).....	7 days.....	7 days.	Marasmus.
	<i>August.</i>		
Thornburgh, Eleanore M.	10 months ..	33	Septicemia.
	<i>October.</i>		
MacIntyre (baby).....	1 day.....	1 day.	Cerebral paralysis.
Ortega, Mary.....	.....	57	Nephritis, chronic.
Scherburgh, Albert....	9 months...	9 months.	Malarial fever.
	<i>November.</i>		
Hern, Mrs. John F....	.....	28	Hæmoglobinuric fever.
	<i>December.</i>		
Atterbury, Mrs. C. L. ...	6 months...	(?)	Hyperemesis gravidarum.
Evans, Edith Emma ..	3 months...	3 months.	Capillary bronchitis.

Average number of white American women and children living in Commission quarters, for the year.....	1, 337
Total number of deaths among white American women and children for the year.....	9
Annual average, per 1,000, of deaths among white American women and children.....	6.73

## CAUSES OF DEATH.

[Embracing employees of the Canal Commission and Panama Railroad Company, and also the deaths among the civil population.]

Diseases.	An- con hos- pital.	Colon hos- pital.	Line hos- pital.	Pan- ama.	Colon	Zone.	Total.
<i>I. General Diseases.</i>							
Typhoid fever (abdominal typhus)	58	37	11	1	2	6	115
Relapsing fever				1			1
Malarial fever	12	94	20	109	60	120	415
Æstivo-autumnal	11	6	7	31	3	10	68
Clinical	3	8	2	14	7	16	50
Malarial cachexia		3	4	6		2	15
Hæmoglobinuric fever	4	10	2	3		1	20
Smallpox		1					1
Diphtheria				1			1
Dysentery	4		3	22	5	21	55
Bacillary			1				1
Amœbic	29	18	6				53
Clinical			1	3	1	2	7
Leprosy						1	1
Beriberi	1			48		4	53
Purulent infection and septicæmia.	22	13	3	3	3	1	45
Tuberculosis of the larynx				1			1
Tuberculosis of the lungs	17	31	38	146	19	44	295
Tuberculosis of the meninges		3		3			6
Abdominal tuberculosis	3	1		2			6
White swelling		1					1
Tuberculosis of other organs	2		1				3
General tuberculosis	17	10	3	7	2		39
Scrofula				1			1
Syphilis	2	2	2	6	1	1	14
Cancer and other malignant tumors of the buccal cavity		1		1			2
Cancer and other malignant tumors of stomach and liver	3			3		1	7
Cancer and other malignant tumors of peritoneum, intestines, and rectum			1			1	2
Cancer and other malignant tumors of the female genital organs					2		2
Cancer and other malignant tumors of the breast				1	1		2
Cancer and other malignant tumors of other organs or of organs not specified		1		3			4
Other tumors (tumors of the female genital organs excepted)				1			1
Acute articular rheumatism				1		4	5
Chronic rheumatism and gout						1	1
Diabetes			1	1			2
Leukæmia				2			2
Anæmia, chlorosis	2			5	2	4	13
Other general diseases	1			1			2
Acute and chronic rheumatism				4		1	5
Other chronic poisoning		1		2	2	3	8



## CAUSES OF DEATH—Continued.

Diseases.	An- con hos- pital.	Colon hos- pital.	Line hos- pital.	Pan- ama.	Colon	Zone.	Total.
<i>II. Diseases of the nervous system and the organs of special sense.</i>							
Encephalitis.....			1				1
Simple meningitis.....	3	2	1	9	7	1	23
Epidemic cerebro-spinal meningitis.....	7						7
Pneumococcus meningitis.....	5	6		4		2	17
Other diseases of the spinal cord.....	1					1	2
Congestion and hemorrhage of the brain.....	1	1	3	14	7	11	37
Softening of the brain.....	1			2			3
Paralysis without specified cause.....				2		1	3
General paralysis.....	1		1				2
Other forms of mental alienation.....	2		3	1			6
Epilepsy.....					1		1
Convulsions (nonpuerperal, 5 years and over).....					2	1	3
Convulsions (under 5 years).....				2	9	9	20
Tetanus.....	2	3		27	2	2	36
Other diseases of the nervous system.....				1	1		2
Diseases of the eye and its adnexa.....				1			1
Diseases of the ear.....				1			1
<i>III. Diseases of the circulatory system.</i>							
Pericarditis.....	1			1		2	4
Pneumococcus pericarditis.....		1					1
Acute endocarditis.....	2			13			15
Septic endocarditis.....	1	1		1			3
Organic diseases of the heart.....	12	8	4	19	17	24	84
Angina pectoris.....				5		1	6
Diseases of the arteries (atheroma, aneurism, etc.).....	3	3	2	7		2	17
Embolism and thrombosis.....		1					1
Diseases of the veins (varices, hemorrhoids, phlebitis, etc.).....						1	1
Hemorrhages.....	1	1		4	3	4	13
Other diseases of the circulatory system.....				1	4		5
<i>V. Diseases of the respiratory system.</i>							
Diseases of the larynx.....		1		2		1	4
Acute bronchitis.....	1			18	6	3	28
Chronic bronchitis.....		1		2		1	4
Broncho-pneumonia.....	20	4		20	4	3	51
Pneumonia.....	134	152	43	118	23	60	530
Pleurisy.....	3		1	3	2	1	10
Congestion and apoplexy of the lungs.....			2	9			11
Gangrene of the lungs.....	3	1					4
Asthma.....				1			1
Pulmonary emphysema.....					1		1
Other diseases of the respiratory system.....				4	1	1	6

## CAUSES OF DEATH—Continued.

Disease.	An- con- hos- pital.	Colon hos- pital.	Line hos- pital.	Pan- ama.	Colon	Zone.	Total.
<i>V. Diseases of the digestive system.</i>							
Diseases of the mouth and its adnexa.....				1		1	2
Diseases of the esophagus.....				1			1
Ulcer of the stomach.....	1	1				1	3
Other diseases of the stomach (cancer excepted).....		1		4	2		7
Diarrhea and enteritis (under 2 years).....				74	18	19	111
Chronic diarrhea and enteritis (under 2 years).....				13	3	2	18
Diarrhea and enteritis (2 years and over).....	10	2		53	6	8	79
Intestinal parasites.....	1			2		3	6
Uncinariasis.....	1	2		1		3	7
Hernia and intestinal obstruction.....	4		3	11		3	21
Other diseases of the intestines.....				22	1	2	25
Cirrhosis of the liver.....	4	3		11	2	4	24
Biliary calculi.....			1	5		1	7
Other diseases of the liver.....	7	5		9	2	2	25
Diseases of the spleen.....	1	1					2
Simple peritonitis.....	3	3		2	5	5	18
Other diseases of the digestive system (cancer and tuberculosis excepted).....		1		10	1	3	15
Appendicitis and abscess of the iliac fossa.....	1			1			2
<i>VI. Diseases of the genito-urinary system and its adnexa.</i>							
Acute nephritis.....	9	12	2	26	1	7	57
Bright's disease.....	23	38	5	45	6	13	130
Other diseases of the kidneys and their adnexa.....		2					2
Diseases of the urethra, urinary abscess, etc.....	4					1	5
Uterine tumors (noncancerous).....				1			1
Other diseases of the uterus.....				2			2
Other diseases of the female geni- tal organs.....				1			1
<i>VII. The puerperal state.</i>							
Accidents of pregnancy.....	1			1	2	1	5
Other accidents of labor.....				2	1	2	5
Puerperal septicæmia.....		4		4	4	6	18
Puerperal albuminuria and con- vulsions.....				2		1	3
<i>VIII. Diseases of the skin and cellular tissue.</i>							
Gangrene.....	3			1	1	1	6
Acute abscess, phlegmon.....				1	2	1	4
Other diseases of the skin and its adnexa.....				3			3

## CAUSES OF DEATH—Continued.

Disease.	An- con hos- pital.	Colon hos- pital.	Line hos- pital	Pan- ama.	Colon	Zone.	Total.
<i>IX. Diseases of the organs of locomotion.</i>							
Nontuberculous diseases of the bones.....				2			2
Arthritis and other diseases of the joints.....	1			1			2
Amputation.....	1						1
<i>X. Malformations.</i>							
Congenital malformations (still- births excepted).....		1		1			2
<i>XI. Early infancy.</i>							
Congenital debility, icterus and sclerema.....	4	3	1	10	22	40	80
Other diseases peculiar to early infancy.....				15	10	8	33
Lack of care.....				1			1
<i>XII. Old age.</i>							
Senile debility.....				8	2	14	24
<i>XIII. External causes.</i>							
Suicide by asphyxia.....				1			1
Suicide by drowning.....						1	1
Suicide by firearms.....						2	2
Suicide by cutting instruments.....					3		3
Other suicides.....				2		2	4
Fractures.....	4	2		4		8	18
Other accidental traumatisms.....	27	14	9	6	2	97	155
Burns and scalds.....	3			5			8
Sunstroke.....					1		1
Electric shock.....	1						1
Accidental drowning.....				3	6	50	59
Inanition (starvation).....						2	2
Absorption of deleterious gases (nonsuicidal).....					1		1
Other acute poisoning.....	3			3		4	10
Other external violence.....				4	1	3	8
<i>XIV. Ill-defined diseases.</i>							
Dropsy.....			1	6	1	9	17
Sudden death.....				2		1	3
Causes of death unspecified or ill- defined.....	1	2	2	31	7	48	91
Total.....	513	524	191	1,139	313	755	3,435
Stillbirths.....				86	34	45	165

## MORBIDITY AND MORTALITY TABLES.

*Employees discharged and dying in hospitals of the Isthmian Canal Commission, year 1907.*

[Average number of employees, 39,343.]

## MORBIDITY.

	Total.	Annual average per 1,000.
Number of European diseases treated during year.....	6,829	173.57
Number of climatic diseases treated during year.....	16,815	427.39
Total.....	23,644	600.96
Discharges from "external causes".....	1,416	.....
Total discharges.....	25,060	.....

## MORTALITY.

Deaths from European diseases during year.....	683	17.36
Deaths from climatic diseases during year.....	180	4.57
Total.....	863	21.93
Deaths from "external causes".....	48	.....
Total deaths.....	911	.....

NOTE.—The following are considered as climatic diseases: The endemics, including malaria, dysentery, yellow fever, beri-beri, smallpox, etc.

TABLE SHOWING DISCHARGES AND DEATHS OF EMPLOYEES IN THE HOSPITALS OF THE ISTHMIAN CANAL COMMISSION FOR THE YEAR 1907, FROM ALL CAUSES.

Diseases.	Discharged.	Died.
<i>I. General diseases.</i>		
Typhoid fever (abdominal typhus).....	469	95
Relapsing fever.....	9	0
Malarial fever.....	2,030	71
Malarial fever, æstivo-autumnal.....	4,876	16
Malarial fever, tertian.....	3,074	1
Malarial fever, quartan.....	8	0
Malarial fever, mixed.....	280	0
Malarial fever, clinical.....	5,794	31
Malarial cachexia.....	240	8
Hæmoglobinuric fever.....	27	11

TABLE SHOWING DISCHARGES AND DEATHS OF EMPLOYEES IN THE HOSPITALS, ETC.—Continued.

Diseases.	Dis- charged.	Died.
<i>I. General Diseases—Continued.</i>		
Smallpox .....	1	0
Measles .....	58	0
Diphtheria .....	1	0
Influenza .....	29	0
Miliary fever .....	1	0
Dysentery .....	285	3
Dysentery, bacillary .....	6	1
Dysentery, amœbic .....	138	36
Dysentery, clinical .....	53	1
Beriberi .....	3	1
Erysipelas .....	4	0
Other epidemic diseases .....	14	1
Purulent infection and septicæmia .....	10	32
Tuberculosis of the larynx .....	1	1
Tuberculosis of the lungs .....	117	43
Tuberculosis of the meninges .....	0	2
Cold abscess and abscess by congestion .....	162	0
Tuberculosis of other organs .....	12	2
General tuberculosis .....	4	17
Syphilis .....	243	2
Gonorrhea .....	190	0
Cancer and other malignant tumors of the buccal cavity .....	1	0
Cancer and other malignant tumors of stomach and liver .....	0	2
Cancer and other malignant tumors of peritoneum, intestines, and rectum .....	4	0
Cancer and other malignant tumors of the skin .....	12	0
Cancer and other malignant tumors of other organs or of organs not specified .....	5	1
Acute articular rheumatism .....	84	0
Chronic rheumatism and gout .....	45	0
Diabetes .....	0	1
Leukæmia .....	2	0
Anæmia, chlorosis .....	56	1
Other general diseases .....	464	5
Acute and chronic rheumatism .....	74	0
Chronic lead poisoning .....	6	0
Other chronic poisoning (occupational) .....	1	0
Other chronic poisoning .....	59	1
<i>II. Diseases of the nervous system and the organs of special sense.</i>		
Simple meningitis .....	3	7
Epidemic cerebro-spinal meningitis .....	1	10
Pneumococcus meningitis .....	0	2
Progressive locomotor ataxia .....	1	0
Congestion and hemorrhage of the brain .....	0	2
Paralysis without specified cause .....	4	0
Other forms of mental alienation .....	40	1
Epilepsy .....	17	0
Tetanus .....	0	4
Other diseases of the nervous system .....	87	0
Diseases of the eye and its adnexa .....	344	0
Diseases of the ear .....	214	0



TABLE SHOWING DISCHARGES AND DEATHS OF EMPLOYEES IN THE HOSPITALS, ETC.—Continued.

Diseases.	Dis- charged.	Died.
<i>III. Diseases of the circulatory system.</i>		
Pericarditis.....	3	2
Pneumococcus pericarditis.....	0	1
Acute endocarditis.....	4	5
Septic endocarditis.....	0	3
Organic disease of the heart.....	26	11
Diseases of the arteries (atheroma, aneurism, etc.).....	9	3
Embolism and thrombosis.....	1	1
Diseases of the veins (varices, hemorrhoids, phlebitis, etc.).....	105	0
Diseases of the lymphatic system (lymphangitis, etc.).....	93	0
Hemorrhages.....	6	0
Other diseases of the circulatory system.....	37	2
<i>IV. Diseases of the respiratory system.</i>		
Diseases of the nasal fossæ.....	16	0
Diseases of the larynx.....	44	1
Diseases of the thyroid body.....	5	0
Acute bronchitis.....	204	0
Chronic bronchitis.....	35	0
Broncho-pneumonia.....	14	18
Pneumonia.....	566	292
Pleurisy.....	76	1
Gangrene of the lungs.....	0	2
Asthma.....	21	0
Pulmonary emphysema.....	29	1
Other diseases of the respiratory system (phthisis excepted).....	48	5
<i>V. Diseases of the digestive system.</i>		
Diseases of the mouth and its adnexa.....	52	0
Diseases of the pharynx.....	43	0
Ulcer of the stomach.....	2	1
Other diseases of the stomach (cancer excepted).....	99	0
Diarrhea and enteritis.....	425	2
Intestinal parasites.....	13	0
Uncinariasis.....	135	2
Hernia and intestinal obstructions.....	167	4
Other diseases of the intestines.....	59	9
Cirrhosis of the liver.....	8	2
Biliary calculi.....	2	0
Other diseases of the liver.....	36	7
Diseases of the spleen.....	6	2
Simple peritonitis.....	12	10
Other diseases of the digestive system (cancer and tubercu- losis excepted).....	59	1
Appendicitis and abscess of the iliac fossa.....	38	1
<i>VI. Diseases of the genito-urinary system and its adnexa.</i>		
Acute nephritis.....	67	30
Bright's disease.....	18	17
Other diseases of the kidneys and their adnexa.....	45	7
Diseases of the bladder.....	53	0
Diseases of the urethra, urinary abscess, etc.....	143	1



TABLE SHOWING DISCHARGES AND DEATHS OF EMPLOYEES IN THE HOSPITALS, ETC.—Continued.

Diseases.	Dis- charged.	Died.
<i>VI. Diseases of the genito-urinary system and its adnexa—Continued.</i>		
Diseases of the prostate.....	3	0
Nonvenereal diseases of the male genital organs.....	327	1
Uterine hemorrhage (nonpuerperal).....	1	0
Uterine tumors (noncancerous).....	1	0
Other diseases of the uterus.....	3	0
Other diseases of the female genital organs.....	1	0
<i>VII. The puerperal state.</i>		
Accidents of pregnancy.....	3	0
<i>VIII. Diseases of the skin and cellular tissue.</i>		
Gangrene.....	0	1
Furuncle.....	99	0
Acute abscess, phlegmon.....	115	3
Other diseases of the skin and its adnexa.....	300	0
<i>IX. Diseases of the organs of locomotion.</i>		
Nontuberculous diseases of the bones.....	9	0
Arthritis and other diseases of the joints (tuberculosis and rheumatism excepted).....	60	1
Amputation.....	31	0
Other diseases of the organs of locomotion.....	23	0
<i>X. Malformations.</i>		
Congenital malformations (stillbirths excepted).....	16	0
<i>XII. Debility.</i>		
Debility.....	133	0
<i>XIII. External causes.</i>		
Fractures.....	226	6
Dislocation.....	37	0
Other accidental traumatisms.....	989	35
Burns and scalds.....	40	4
Sunstroke.....	4	0
Inanition (starvation).....	1	0
Other acute poisoning.....	58	0
Other external violence.....	61	3
<i>XIV. Ill-defined diseases.</i>		
Dropsy.....	0	1
Causes of death unspecified or ill-defined.....	31	0
Total.....	25,060	911

## CONSOLIDATED HOSPITAL REPORT, YEAR 1907.

Hospitals.	Re- main- ing Dec. 31, 1906.	Ad- mit- ted.	Died.	Dis- charged	Trans- ferred.	Re- main- ing Dec. 31, 1907.
<i>Ancon Hospital.</i>						
Employees.....	356	13,134	436	11,726	919	409
Nonemployees.....	51	1,103	77	866	20	191
Total .....	407	14,237	513	12,592	<sup>a</sup> 939	600
<i>Colon Hospital.</i>						
Employees.....	203	7,837	341	7,325	118	256
Nonemployees.....	62	1,366	183	1,172	12	61
Total .....	265	9,203	524	8,497	<sup>b</sup> 130	317
<i>Culebra Hospital.</i>						
Employees.....	29	1,234	55	1,162	46	0
Nonemployees.....	0	16	6	10	0	0
Total .....	29	1,250	61	1,172	46	0
<i>Miraflores Hospital.</i>						
Employees.....	27	123	22	96	32	0
Nonemployees.....	98	214	45	97	270	0
Total.....	125	337	67	193	302	0
<i>Bas Obispo Hospital.</i>						
Employees.....	9	667	8	556	112	0
Nonemployees.....	0	4	0	3	1	0
Total.....	9	671	8	559	<sup>c</sup> 113	0
<i>Gorgona Hospital.</i>						
Employees.....	6	630	9	461	166	0
Nonemployees.....	0	15	5	8	2	0
Total.....	6	645	14	469	168	0
<i>Empire Hospital.</i>						
Employees.....	7	815	7	508	307	0
Nonemployees.....	1	3	0	4	0	0
Total.....	8	818	7	512	307	0

<sup>a</sup> 688 employees transferred to Taboga Sanitarium; 7 nonemployees transferred to Taboga Sanitarium.

<sup>b</sup> 55 employees transferred to Taboga Sanitarium.

<sup>c</sup> 4 employees transferred to Taboga Sanitarium.

## CONSOLIDATED HOSPITAL REPORT, YEAR 1907—Continued.

Hospitals.	Re- main- ing Dec. 31, 1906.	Ad- mit- ted.	Died.	Dis- charged	Trans- ferred.	Re- main- ing Dec. 31, 1907.
<i>Las Cascadas Hospital.</i>						
Employees.....	9	739	7	661	80	0
Nonemployees.....	1	19	3	12	5	0
Total.....	10	758	10	673	a 85	0
<i>Paraiso Hospital.</i>						
Employees.....	6	773	18	693	68	0
Nonemployees.....	0	1	0	1	0	0
Total.....	6	774	18	694	68	0
<i>Gatun Hospital.</i>						
Employees.....	0	955	7	832	116	0
Nonemployees.....	0	2	1	0	1	0
Total.....	0	957	8	832	117	0
<i>Taboga Sanitarium.</i>						
Employees.....	28	2,020	0	2,004	1	43
Nonemployees.....	7	393	0	387	0	13
Total.....	35	2,413	0	2,391	1	56
Grand total.....	900	32,063	1,230	28,584	2,276	973
Total number of employees re- maining in hospitals.....						708

a 2 employees transferred to Taboga Sanitarium.

## Cost of subsistence:

Total cost of rations issued to patients, \$119,173.84.

Cost of subsistence per patient per day, \$0.30349. +

Number of days' rations issued to patients, 392,678.

## Operating expenses:

Total cost of hospitals, \$710,635.20.

Cost per patient per day, \$1.80.

Number of days' relief furnished, 392,678.

## CONSOLIDATED SICK CAMP REPORT, YEAR 1907.

Sick camps.	Re- main- ing Dec. 31, 1906.	Ad- mitted and ex- cused.	Died.	Dis- charged.	Trans- ferred.	Re- main- ing Dec. 31, 1907.
Culebra.....	5	1,847	1	1,691	145	15
Miraflores.....	0	90	0	63	18	9
Bas Obispo.....	28	2,727	0	2,389	357	9
Gorgona.....	1	2,264	0	1,853	402	10
Empire.....	5	2,786	1	2,738	31	21
Paraiso.....	12	3,928	2	3,887	40	11
Las Cascadas.....	8	1,209	0	1,024	184	9
Gatun.....	15	3,650	0	3,040	605	20
Pedro Miguel.....	16	1,691	1	1,461	232	13
Panama.....	0	2,303	0	2,175	127	1
La Boca.....	0	3,975	0	3,760	202	13
San Pablo.....	0	127	0	109	16	2
Corozal.....	3	1,659	0	1,264	396	2
Cristobal.....	8	1,033	0	860	174	7
Tabernilla.....	7	3,162	2	2,361	788	18
Total.....	108	32,451	7	28,675	3,717	160

## Cost of subsistence:

Total cost of rations issued to patients..... \$10,621.60  
 Cost of subsistence per patient per day..... 0.23103+  
 Number of days rations issued to patients,  
 45,975.

## Operating expenses:

Total cost of hospitals..... 25,000.00  
 Cost per patient per day..... 0.543  
 Number of days relief furnished, 45,975.

## CONSOLIDATED HOSPITAL AND SICK CAMP REPORT.

	Re- main- ing De- cember 31, 1906.	Ad- mitted and ex- cused for quar- ters.	Died.	Dis- charged.	Trans- ferred.	Re- main- ing De- cember 31, 1907.
Hospitals.....	900	32,063	1,230	28,534	2,276	973
Sick camps.....	108	32,451	7	28,675	3,717	160
Total.....	1,008	64,514	1,237	57,209	5,993	1,133

Total admissions to hospitals and sick camps during year.. 64,514  
 Less patients transferred from one hospital to another,  
 from sick camps to hospitals, and from hospitals to  
 sanitarium..... 5,993

Net admissions to hospitals and sick camps during  
 year..... 58,521

## HOSPITALS AND SICK CAMPS.

## Cost of subsistence:

Total cost of rations issued to patients..... \$129,795.44  
 Cost of subsistence per patient per day..... 0.295+  
 Number of days rations issued to patients,  
 438,653.

## Operating expenses:

Total cost of hospitals and sick camps..... 735,635.20  
 Cost per patient per day ..... 1.677  
 Number of days relief furnished, 438,653.

AVERAGE NUMBER OF EMPLOYEES CONSTANTLY SICK DURING  
YEAR IN HOSPITALS AND SICK CAMPS.

HOSPITALS.

Ancon Hospital.....	440.00
Colon Hospital.....	243.00
Miraflores Hospital.....	13.90
Culebra Hospital.....	23.08
Bas Obispo Hospital.....	12.98
Gorgona Hospital.....	9.64
Empire Hospital.....	10.01
Paraiso Hospital.....	9.01
Las Cascadas Hospital.....	8.09
Gatun Hospital.....	28.92
Taboga Sanitarium.....	38.45

Total average number of employees constantly sick in hospitals during year.....	837.08
Average number of employees sick daily in hospitals, per thousand.....	21.27

SICK CAMPS.

Miraflores Sick Camp.....	5.31
Culebra Sick Camp.....	8.54
Bas Obispo Sick Camp.....	18.78
Gorgona Sick Camp.....	7.63
Empire Sick Camp.....	12.27
Paraiso Sick Camp.....	13.43
Las Cascadas Sick Camp.....	4.61
Gatun Sick Camp.....	21.08
Pedro Miguel Sick Camp.....	9.52
Panama (after July, Tivoli) Sick Camp.....	6.15
La Boca Sick Camp.....	10.92
San Pablo Sick Camp.....	2.47
Corozal Sick Camp.....	5.01
Cristobal Sick Camp.....	10.18
Tabernilla Sick Camp.....	14.69

Total average number of employees constantly sick in sick camps during year.....	150.59
Average number of employees sick daily in sick camps, per thousand.....	3.82
Total average number of employees sick constantly in hos- pitals and sick camps.....	987.67
Total average number sick daily in hospitals and sick camps, per thousand.....	25.09



## CONSOLIDATED DISPENSARY REPORT, YEAR 1907.

	White.	Colored.	Total.
Employees.....	143, 057	110, 863	253, 920
Nonemployees.....	10, 012	6, 208	16, 220
Total.....	153, 069	117, 071	270, 140

REPORT OF ALL OPERATIONS IN HOSPITALS OF THE ISTHMIAN  
CANAL COMMISSION FOR THE YEAR 1907.

	Number of operations.
Appendicitis.....	4
Adenectomy:	
Inguinal.....	274
Submaxillary (cancer).....	1
Appendectomy.....	42
Appendostomy for dysentery.....	9
Amœbic perforation, laparotomy for.....	2
Abscess:	
Liver.....	29
Spleen.....	1
Psoas.....	1
Pelvis.....	6
Amputation:	
Thigh.....	12
Fingers.....	5
Leg.....	30
Breast.....	1
Hand.....	3
Penis.....	1
Arm.....	8
All toes on one foot.....	1
Toe.....	1
Feet.....	16
Forearms.....	2
Shoulder joint.....	2
Hip joint.....	4
Castration.....	3
Cancer of lip.....	1
Cataracts.....	3
Cecostomy.....	2
Cholecystostomy.....	4
Colopexy.....	1
Cellulitis.....	5
Decapulation, kidneys.....	2
Dilatation and curettement, uterine.....	5

	Number of operations.
Excision:	
Head of femur.....	1
Testicle.....	3
Breast.....	1
Of ankle joint.....	1
Evisceration, eye.....	2
Enucleation:	
Inguinal glands.....	126
Cervical glands.....	5
Femoral glands.....	6
Exploratory, abdominal sections.....	19
Empyema, resection of ribs.....	12
Eye, ear, nose, and throat:	
Major operations.....	74
Minor operations.....	580
Fracture:	
Of leg.....	2
Of spine.....	1
Of skull.....	8
Compound.....	22
Wired.....	3
Fistula, faecal, closure of.....	1
Gastro-enterostomy.....	1
Goiter.....	1
Hernia:	
Inguinal.....	203
Inguinal, double.....	22
Strangulated.....	7
Femoral.....	2
Umbilical.....	2
Ventral.....	9
Strangulated, umbilical.....	1
Hydrocele.....	68
Hæmorrhoids.....	82
Hysteromyomectomy.....	5
Hysterectomy.....	5
Iridectomy.....	2
Internal strabismus.....	1
Intestinal perforation, laparotomy for.....	4
Laparotomies.....	37
Laminectomy.....	4
Lithotomy.....	1
Malignant growths.....	5
Orchidectomy.....	12
Osteomyelitis.....	7
Osteomyelitis (tibia).....	1
Ovariectomy.....	6
Ovaries, prolapse, both.....	1

	Number of operations.
Pyosalpingectomy.....	2
Perineorrhaphy.....	13
Peritonitis, laparotomy for.....	22
Pregnancy, extra uterine, ruptured.....	1
Plastic operations.....	4
Pneumonotomy.....	1
Pyosalpinx.....	1
Pelvic adhesions.....	2
Pericardiotomy.....	1
Perforation of ileum, laparotomy for.....	1
Resection:	
Of knee.....	1
Of rectum.....	1
Of wrist.....	1
Septal.....	3
Rupture:	
Spleen, laparotomy for.....	1
Gastro-colic omentum.....	1
Reduction of hip dislocation.....	1
Skin graft.....	24
Stricture, urethra.....	7
Salpingo-oophorectomy.....	12
Double.....	1
Suspension of uterus.....	1
Sarcoma of scrotum, cord, and testicle.....	2
Sigmoidopexy.....	6
Splenectomy.....	1
Scalp, avulsion of.....	1
Seminal vesicle, Belfield's operation for drainage of.....	1
Thoracostomy.....	24
Thoracostomy-pneumo.....	1
Trephining.....	5
Trachelorrhaphy.....	4
Talma.....	1
Urethrotomy:	
Perineal.....	65
Internal.....	10
Uterus:	
Ventral fixation of.....	1
Ventral suspension of.....	2
Varicose veins.....	1
Varicocele.....	28
Volvulus, abdominal sections.....	1
Various major operations.....	252
Various minor operations.....	3,325
Total operations.....	5,672

CONSOLIDATED LABORATORY REPORT OF ALL HOSPITALS OF THE  
ISTHMIAN CANAL COMMISSION FOR THE YEAR 1907.

Blood examinations.....	22, 295
Æstivo-autumnal.....	5, 291
Tertian, single.....	3, 288
Tertian, double.....	379
Tertian, triple.....	13
Tertian and æstivo-autumnal.....	177
Spirillum obermeieri.....	25
Hæmoglobin estimations.....	12
Filaria sanguinis.....	3
Negative.....	5, 814
Blood counts.....	1, 435
Red blood counts.....	27
White blood counts.....	1, 163
Hæmoglobin estimations.....	1, 065
Differential counts.....	230
Widal reactions:	
Positive.....	76
Negative.....	179
Stool examinations.....	20, 773
Ascaris lumbricoides.....	1, 873
Uncinaria ova.....	2, 651
Tricocephalus dispar.....	3, 931
Round worm.....	1
Bilharzia.....	62
Tenia.....	16
Oxyuris.....	2
Amœba coli.....	488
Amœba dysenteria.....	119
Ciliated monads.....	777
Pus and blood.....	1, 233
Balantidium coli.....	22
Negative.....	4, 056
Rhabdonema strongyloides.....	689
Cercomonas and trichomonas.....	26
Ankylostoma duodenale.....	689
Cercomonas intestinalis.....	339
Cercomonads.....	16
Tricomonads.....	1
Monads.....	78
Miscellaneous examinations.....	8
Urine examinations.....	25, 943
Sugar.....	17
Negative.....	42
Albumen.....	7, 217
Negative.....	100

## Urine examinations—Continued.

Hyaline casts.....	1
Casts.....	25
Albumen and casts.....	975
Urethral discharges.....	7
Gonococci.....	11
Pus, blood, and mucus.....	18
Hæmoglobin.....	29
Phosphate in excess.....	1
Diazo reaction:	
Positive.....	81
Negative.....	199
Microscopical examinations.....	353
Bile.....	26
Complete urinalyses.....	8
Indican.....	2
Spermatozoa.....	1
Negative.....	7, 187
Sputum examinations.....	1, 147
Pneumococcus.....	38
Tubercular bacilli.....	222
Amœba.....	1
Examination of bacilli for leprosy.....	1
Negative.....	1
Miscellaneous.....	4
Negative.....	527
Examination of pus, blood, and mucus.....	111
Gonococci.....	11

## PATHOLOGICAL REPORT.

Post-mortem examinations.....	499
Post-mortem tissues sectioned.....	110
Operation examinations.....	10
Malignant tumors.....	2
Analyses of stomach contents.....	2
Microscopical examinations of tissues.....	170
Embalming.....	5
Celloidin sections examined.....	206
Paraffin sections examined.....	450
Wright's stain prepared.....	2, 850
Cultures of catgut.....	5

## REPORT OF ANCON HOSPITAL.

[Full report of number of patients treated during year appears under table  
"Consolidated Hospital Report."]

Average number of days treatment per patient for the year.....	8.7
Average number of white employees constantly sick for the last nine months of the year.....	223
Average number of colored employees constantly sick for the last nine months of the year.....	236
Average number of white and colored employees constantly sick for the year.....	440
Average cost of subsistence per patient per day for the year.....	\$0.279+

## OPERATIONS.

Thoracostomy.....	24
Pneumothoracostomy.....	1
Varicose veins.....	1
Orchidectomy.....	4
Hernia:	
Inguinal.....	129
Inguinal, double.....	21
Strangulated.....	3
Femoral.....	2
Ventral.....	4
Strangulated, umbilical.....	1
Trephine.....	2
Excision head of femur.....	1
Excision:	
Testicle.....	3
Of breast.....	1
Of ankle joint.....	1
Laparotomy.....	36
Appendicitis.....	4
Gastro-enterostomy.....	1
Goitre.....	1
Decapsulation kidneys.....	2
Urethrotomy:	
Perineal.....	42
Internal.....	4
Adenectomy, inguinal.....	273
Castration.....	3
Amputation:	
Thigh.....	5
Leg.....	18
Hand.....	3
Arm.....	1



## Amputation—Continued.

Foot.....	2
Fore arms.....	9
Shoulder joint.....	1
Hip joint.....	1
Pyosalpingectomy.....	2
Laminectomy.....	2
Perineorrhaphy.....	6
Osteomyelitis.....	3
Hydrocele.....	32
Varicocele.....	6
Resection:	
Knee.....	1
Of rectum.....	1
Of wrist.....	1
Hæmorrhoids.....	63
Cancer of lip.....	1
Peritonitis, laparotomy for.....	16
Skin graft.....	21
Appendectomy.....	21
Fracture:	
Of leg.....	1
Of spine.....	1
Of skull.....	8
Compound.....	19
Trachelorrhaphy.....	4
Submaxillary adenectomy (cancer).....	1
Stricture of urethra.....	7
Iridectomy.....	2
Cataracts.....	3
Cecostomy.....	2
Evisceration, eye.....	2
Septal resection.....	3
Internal strabismus.....	1
Extra-uterine pregnancy, ruptured.....	1
Hysteromyomectomy.....	5
Salpingo-oöphorectomy.....	2
Abscess:	
Liver.....	18
Spleen.....	1
Plastic on face.....	2
Cholecystostomy.....	3
Colopexy.....	1
Eye, ear, nose, and throat, major operations.....	74
Eye, ear, nose, and throat, minor operations.....	300
Various major operations.....	178
Various minor operations.....	857
Total.....	2, 276

## LABORATORY REPORT.

Blood examinations.....	11, 021
Æstivo-autumnal.....	2, 685
Tertian, single.....	1, 496
Tertian, double.....	181
Tertian and æstivo-autumnal.....	66
<i>Spirillum obermeieri</i> .....	4
Blood counts.....	1, 453
Leucocytes.....	824
Red blood cells.....	16
White blood cells.....	13
Hæmoglobin estimations.....	997
Differential counts.....	129
Stool examinations.....	12, 758
<i>Ascaris lumbricoides</i> .....	1, 228
<i>Uncinaria ova</i> .....	2, 201
<i>Tricocephalus dispar</i> .....	2, 361
<i>Strongyloides</i> .....	419
<i>Bilharzia</i> .....	62
<i>Tenia</i> .....	16
<i>Oxyuris</i> .....	2
<i>Amœba coli</i> .....	185
<i>Amœba dysenteria</i> .....	116
Ciliated monads.....	777
Pus and blood.....	1, 095
<i>Balantidium coli</i> .....	13
Urine examinations.....	15, 851
Sugar.....	11
Albumen.....	4, 509
Albumen and casts.....	975
Urethral discharge.....	1
Conococci.....	5
Pus and blood.....	2
Sputum examinations.....	453
Pneumococci.....	30
Tubercular bacilli.....	81
<i>Amœba</i> .....	1
Examination of pus, blood, and tissues.....	111
Gonococci.....	11
Examination of urethral discharges.....	6

## DISPENSARY REPORT.

Class.	White.	Colored.	Total.
Isthmian Canal Commission employees.	938	2, 660	3, 598
Nonemployees.....	98	149	247
Total.....	1, 036	2, 809	3, 845

## REPORT OF COLON HOSPITAL.

[Full report of patients treated during year appears under table "Consolidated Hospital Report."]

Average number of days treatment, per patient.....	10. 85
Average number of white employees constantly sick for the last nine months of the year.....	92
Average number of black employees constantly sick for the last nine months of the year.....	164
Average number of white and black employees constantly sick for the year.....	243
Average cost of subsistence per patient per day for the year..	\$0. 32

## OPERATIONS.

Abscess of liver.....	11
Abscess of psoas.....	1
Cholecystostomy.....	1
Hydrocele.....	36
Varicocele.....	22
Hemorrhoids.....	19
Perineal urethrotomy.....	23
Internal urethrotomy.....	4
Amputation:	
Hip-joint.....	3
Leg.....	6
Thigh.....	4
Foot.....	3
Penis.....	1
Arm.....	4
Breast.....	1
Shoulder.....	2
Enucleation:	
Of inguinal glands.....	126
Of cervical glands.....	5
Of femoral glands.....	6

Appendectomy.....	21
Kystectomy.....	5
Appendectomy for dysentery.....	9
Exploratory, abdominal sections.....	19
Volvulus, abdominal sections.....	1
Pneumonotomy.....	1
Malignant growths.....	5
Fractures:	
Compound.....	3
Wired.....	3
Pyosalpinx.....	1
Lithotomy.....	1
Osteomyelitis (tibia).....	1
Skin graft.....	3
Hernia:	
Inguinal.....	72
Inguinal, double.....	1
Ventral.....	5
Umbilical.....	2
Inguinal, strangulated.....	1
Salpingo-oöphorectomy:	
Single.....	10
Double.....	1
Ovariectomy.....	6
Perineorrhaphy.....	7
Suspension of uterus.....	1
Sarcoma of scrotum, cord, and testicle.....	2
Dilatation and curettement, uterine.....	18
Laminectomy.....	2
Empyema, resection of rib.....	12
Pelvic abscess.....	6
Pelvic adhesions.....	2
Intestinal perforation, laparotomy for.....	4
Ventral fixation of uterus.....	1
Ventral suspension of uterus.....	2
Sigmoidopexy.....	6
Trephining.....	3
Orchidectomy.....	8
Plastic operations.....	2
Pericardiotomy.....	1
Osteomyelitis.....	4
Peritonitis, laparotomy for.....	6
Amœbic perforation, laparotomy for.....	2
Talna.....	1
Rupture:	
Of spleen, laparotomy for.....	1
Of gastro-colic omentum.....	1

Closure of focal fistula.....	1
Splenectomy.....	1
Prolapse, both ovaries.....	1
Reduction of hip dislocation.....	1
Cellulitis.....	4
Eye, ear, nose, and throat operations.....	280
Various major operations.....	74
Various minor operations.....	183
Total.....	1,086

## LABORATORY REPORT.

Blood examinations.....	9,678
Æstivo-autumnal.....	2,133
Æstivo-autumnal and tertian.....	106
Tertian.....	1,542
Tertian, double.....	189
Tertian, triple.....	13
Spirillum obermeieri.....	21
Negative.....	5,075
Red blood counts.....	11
White blood counts.....	92
Hæmoglobin estimations.....	68
Leucocyte.....	234
Differential counts.....	101
Widal reactions:	
Positive.....	76
Negative.....	179
Sputum examinations.....	572
Bacillus tuberculosis, positive.....	91
Negative.....	481
Urinalyses.....	8,887
Albumen.....	2,441
Negative.....	6,603
Sugar.....	4
Sugar, negative.....	42
Hæmoglobin.....	21
Diazo reaction:	
Positive.....	81
Negative.....	197
Microscopical examinations.....	344
Bile.....	17
Complete urinalyses.....	8
Indican.....	2
Stool examinations.....	7,751
Negative.....	3,951
Amœba coli.....	297

## Stool examinations—Continued.

Ova of uncinaria.....	327
Ova of tricocephalus dispar.....	1, 537
Rhabdonema strongyloides.....	258
Cercomonas and trichomonas.....	26
Ova of ascaris lumbricoides.....	556
Ova of ankylostomum duodenale.....	670
Cercomonas intestinalis.....	332
Uncinaria.....	93
Ova of ascaris.....	66
Cercomonads.....	16
Blood, pus, and mucus.....	118
Balantidium coli.....	9
Monads.....	78
Miscellaneous examinations.....	8

## PATHOLOGICAL REPORT.

Post-mortem examinations.....	466
Post-mortem, tissues sectioned.....	110
Operation, examinations.....	10
Malignant tumors.....	2
Analyses of stomach contents.....	2
Microscopical examinations of tissues.....	170
Embalming.....	5
Celloidin sections examined.....	206
Paraffin sections examined.....	450
Wright's stain prepared.....	2, 850
Cultures of catgut.....	5

## COLON DISPENSARY REPORT.

Class.	White.	Colored.	Total.
Isthmian Canal Commission employees.	1, 542	1, 916	3, 458
Nonemployees.....	384	714	1, 098
Total.....	1, 926	2, 630	4, 556



## REPORT OF CULEBRA HOSPITAL.

[Full report of number of patients treated during year appears under table  
"Consolidated Hospital Report."]

Average number of days, treatment per patient.....	6. 97
Average number of white employees constantly sick for the last nine months of the year.....	10. 50
Average number of black employees constantly sick for the last nine months of the year.....	11. 80
Average number of white and black employees constantly sick for the year.....	23. 08
Average cost of subsistence per patient per day for the year.	\$0. 299

## OPERATIONS.

Amputations:	
Leg.....	2
Feet.....	2
Arm.....	2
Hernia:	
Inguinal.....	2
Strangulated.....	2
Fractures, leg.....	1
Laparotomy.....	2
Internal urethrotomy.....	1
Minor operations.....	1, 400
Total.....	<hr/> 1, 414

## LABORATORY REPORT.

Blood examinations.....	556
Æstivo-autumnal.....	132
Tertian.....	65
Æstivo-autumnal and tertian.....	5
Tertian, double.....	9
Negative.....	308
Urinalyses.....	612
Albumen.....	177
Albumen negative.....	100
Hæmoglobin.....	4
Negative.....	305
Bile.....	6
Microscopical examinations.....	9
Diazo reactions, negative.....	2
Sputum examinations.....	20
Bacilli tuberculosis.....	9
Negative.....	11

Stool examinations.....	98
<i>Cercomonas intestinalis</i> .....	7
Negative.....	34
<i>Tricocephalus dispar</i> .....	17
<i>Amœbi coli</i> .....	2
<i>Ova ascaris</i> .....	3
<i>Ova of uncinaria</i> .....	19
<i>Strongyloides</i> .....	12
Post-mortem examinations for the year.....	15

## DISPENSARY REPORT.

Class.	White.	Colored.	Total.
Isthmian Canal Commission employees.	19, 555	8, 291	27, 846
Nonemployees.....	2, 220	910	3, 130
Total.....	21. 775	9, 201	30, 976

## SICK-CAMP REPORT.

Remaining in sick camp from last year.....	5
Admitted and excused for quarters.....	1, 847
Died.....	1
Discharged.....	1, 691
Transferred.....	145
Remaining at end of year.....	15
Average number of white employees constantly sick in camp and quarters for eight months of the year.....	6. 36
Average number of black employees constantly sick in camp and quarters for eight months of the year.....	3. 77
Average number of white and colored employees constantly sick in camp and quarters for the year.....	8. 54

## REPORT OF MIRAFLORES HOSPITAL.

[Including Insane Asylum and Leper Asylum. Full report of number of patients treated during year appears under table "Consolidated Hospital Report."]

Average number of days' treatment per patient.....	23. 24
Average number of white employees constantly sick for six months of the year.....	1. 27
Average number of black employees constantly sick for six months of the year.....	9. 70
Average number of white and black employees constantly sick for the year.....	13. 90
Average cost of subsistence per patient per day for nine months of the year.....	\$0. 26

## OPERATIONS.

Amputation of leg.....	1
Minor operations.....	42
Total.....	43

## WARD LABORATORY REPORT.

Blood examinations.....	182
Æstivo-autumnal.....	48
Tertian.....	11
Hæmoglobin estimations.....	10
Filaria sanguinis.....	3
Negative.....	33
Stool examinations.....	41
Ascaris lumbricoides.....	11
Uncinaria ova.....	4
Tricocephalus dispar.....	6
Amœba.....	2
Ankylostoma.....	1
Negative.....	5
Urine examinations.....	196
Sugar.....	1
Albumen.....	36
Casts.....	5
Negative.....	44
Sputum examinations.....	50
Tubercle bacilli.....	31
Negative.....	3
Examination of bacilli for leprosy.....	1
Negative.....	1

## PATHOLOGICAL LABORATORY REPORT.

Post-mortem examinations.....	45
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## DISPENSARY REPORT.

Class.	White.	Colored.	Total.
Isthmian Canal Commission employees.	516	1, 418	1, 934
Nonemployees.....	2	88	90
Total .....	518	1, 506	2, 024

## SICK-CAMP REPORT.

[Started November, 1907.]

Remaining last report.....	0
Admitted and excused.....	90
Died.....	0
Discharged.....	63
Transferred.....	18
Remaining end of year.....	9

Average daily number constantly sick in camp and quarters:	
White.....	1. 80
Black.....	3. 51
Total.....	5. 31

## REPORT OF BAS OBISPO HOSPITAL.

[Full report of number of patients treated appears under table "Consolidated Hospital Report."]

Average number of days treatment per patient.....	9. 64
Average number of white employees constantly sick for five months of the year.....	7. 58
Average number of black employees constantly sick for five months of the year.....	5. 63
Average number of white and black employees constantly sick for the year.....	12. 98
Average cost of subsistence per patient per day for the year..	\$0. 31

## WARD LABORATORY REPORT.

[Operated one month.]

Blood examinations.....	95
Tertian.....	37
Æstivo-autumnal.....	21
Negative.....	37

## DISPENSARY REPORT.

Class.	White.	Colored.	Total.
Isthmian Canal Commission employees..	18, 393	13, 938	32, 331
Nonemployees.....	404	231	635
Total.....	18, 797	14, 169	32, 966

## SICK-CAMP REPORT.

Remaining end of 1906 .....	28
Admitted and excused for quarters .....	2, 727
Died .....	0
Discharged .....	2, 389
Transferred .....	357
Remaining end of 1907 .....	9
Average daily number constantly sick in camp and quarters:	
White (7 months of year) .....	7.34
Black (7 months of year) .....	8.60
Total for year .....	18.78

## REPORT OF GORGONA HOSPITAL.

[Operated first nine months of year. Full report of number of patients treated during year appears under table "Consolidated Hospital Report."]

Average number of days' treatment, per patient .....	4.77
Average number of white employees constantly sick for six months of the year .....	2.80
Average number of black employees constantly sick for six months of the year .....	6.12
Total number of white and black employees constantly sick for the year .....	9.64
Average cost of subsistence per patient per day .....	\$0.21

## OPERATIONS.

Amputations:	
Leg .....	2
Thigh .....	1
Fingers .....	3
All toes on one foot .....	1
Toe .....	1
Strangulated hernia .....	1
Avulsion of scalp .....	1
Cellulitis of leg .....	1
Other operations .....	61
Total .....	72

## WARD LABORATORY REPORT.

Blood examinations .....	161
Aestivo-autumnal .....	49
Tertian .....	33
Haemoglobin .....	2
Negative .....	77

Urine examinations.....	93
Albumen.....	13
Negative.....	10
Bile.....	3
Casts.....	2
Spermatozoa.....	1
Pus.....	3
Hyaline casts.....	1
Stool examinations.....	30
Tricocephalus dispar.....	9
Round worm.....	1
Uncinaria.....	2
Negative.....	12
Ankylostoma.....	2
Ascaris lumbricoides.....	6
Tricomonads.....	1
Post-mortem examinations.....	3

## DISPENSARY REPORT.

	White.	Colored.	Total.
Isthmian Canal Commission employees .	10, 641	8, 232	18, 873
Nonemployees.....	881	524	1, 405
Total.....	11, 522	8, 756	20, 278

## SICK-CAMP REPORT.

Remaining end of 1906.....	1
Admitted and excused for quarters.....	2, 264
Died.....	0
Discharged.....	1, 853
Transferred.....	402
Remaining.....	10
Average daily number constantly sick in camp and quarters:	
White (8 months of year).....	3. 31
Black (8 months of year).....	3. 42
Total for year.....	7. 63



## REPORT OF EMPIRE HOSPITAL.

[Operated for ten months of year. Full report of number of patients treated during year appears under table "Consolidated Hospital Report."]

Average number of days' treatment per patient.....	4.68
Average number of white employees constantly sick for seven months of year.....	7.02
Average number of black employees constantly sick for seven months of year.....	3.72
Average number of white and black employees constantly sick for year.....	10.01
Average cost of subsistence per patient per day for year....	\$0.23

## DISPENSARY REPORT.

	White.	Colored.	Total.
Isthmian Canal Commission employees..	25,367	9,539	34,906
Nonemployees.....	141	99	240
Total.....	25,508	9,638	35,146

## SICK-CAMP REPORT.

Remaining end of 1906.....	5
Admitted and excused for quarters.....	2,786
Died.....	1
Discharged.....	2,738
Transferred.....	31
Remaining end of 1907.....	21
Average daily number constantly sick in camp and quarters:	
White (8 months of year) .....	8.09
Black (8 months of year) .....	6.43
Total for year.....	12.27

## REPORT OF PARAISO HOSPITAL.

[Full report of number of patients treated for the year appears under table "Consolidated Hospital Report."]

Average number of day's treatment per patient.....	3.92
Average number of white employees constantly sick for the last nine months of the year.....	4.08
Average number of black employees constantly sick for the last nine months of the year.....	4.89
Average number of white and black employees constantly sick for the year.....	9.01
Average cost of subsistence per patient per day for the year..	\$0.34

## OPERATIONS.

Various minor operations.....	742
Amputations:	
Fingers.....	2
Right arm.....	1
Left foot.....	1
Leg.....	1
Adenectomy.....	1
Total.....	748

## WARD LABORATORY REPORT.

Blood examinations.....	378
Æstivo-autumnal.....	151
Tertian.....	79
Negative.....	174
Urine examinations.....	138
Negative.....	64
Albumen.....	40
Sugar.....	1
Casts.....	18
Gonococcus.....	6
Pus and blood.....	7
Phosphate in excess.....	1
Mucus.....	6
Sputum examinations.....	30
Pneumococcus.....	8
Miscellaneous.....	4
Negative.....	16
Tubercle bacilli.....	4
Stool examinations.....	70
Ankylostoma.....	10
Uncinaria.....	5
Tricocephalus dispar.....	1
Amœba dysenteria.....	3
Pus and blood.....	20
Ascaris lumbricoides.....	3
Negative.....	37
Post-mortem examinations.....	12

## DISPENSARY REPORT.

	White.	Colored.	Total.
Isthmian Canal Commission employees.....	6, 168	7, 394	13, 562
Nonemployees.....	705	750	1, 455
Total.....	6, 873	8, 144	15, 017

## SICK-CAMP REPORT.

Remaining end of 1906.....	12
Admitted and excused.....	3,928
Died.....	2
Discharged.....	3,887
Transferred.....	40
Remaining end of year.....	11
Average number constantly sick in camp and quarters:	
White (last 7 months of year).....	8.64
Black (last 7 months of year).....	4.28
Total for the year.....	13.43

## REPORT OF LAS CASCADAS HOSPITAL.

[Full report of number of patients treated for the year appears under table  
"Consolidated Hospital Report."]

Average number of days' treatment per patient.....	5.29
Average number of white employees constantly sick for six months of the year.....	3.19
Average number of black employees constantly sick for six months of the year.....	2.60
Average number of white and black employees constantly sick for the year.....	8.09
Average cost of subsistence per patient per day.....	\$0.309

## OPERATIONS.

Part of foot amputated.....	1
Laparotomy for perforation of ileum.....	1
Belfield's operation for drainage of the seminal vesicle.....	1
Amputations:	
Right thigh.....	1
Lower left thigh.....	1
Disarticulation of left shoulder joint.....	1
Minor operations.....	40

## WARD LABORATORY REPORT.

Blood examinations.....	319
Æstivo-autumnal.....	93
Tertian.....	62
Negative.....	145
Urine examinations.....	166
Albumen.....	1
Hæmoglobin.....	4
Negative.....	161

Sputum examinations.....	22
Tubercular.....	6
Negative.....	16
Stool examinations.....	25
Negative.....	17
Amoeba coli.....	2
Ankylostomia.....	6
Post-mortem examinations.....	3

DISPENSARY REPORT.<sup>a</sup>

	White.	Colored.	Total.
Isthmian Canal Commission employees.	4, 911	1, 547	6, 458
Nonemployees.....	311	80	391
Total.....	5, 222	1, 627	6, 849

<sup>a</sup> For last four months of the year.

## SICK-CAMP REPORT.

Remaining end of 1906.....	8
Admitted and excused for quarters.....	1, 209
Died.....	0
Discharged.....	1, 024
Transferred.....	184
Remaining.....	9
Average daily number constantly sick in camp and quarters:	
White (for last 9 months of year).....	3. 33
Black (for last 9 months of year).....	. 98
Total for year.....	4. 61

## REPORT OF GATUN HOSPITAL.

[Hospital opened May 28, 1907. Full report of number of patients treated appears under table "Consolidated Hospital Report."]

Average number of days treatment per patient .....	3. 83
Average number of white employees constantly sick.....	16. 95
Average number of black employees constantly sick.....	11. 97
Average number of white and black constantly sick.....	28. 92
Average cost of subsistence per patient per day .....	\$0. 23

## DISPENSARY REPORT.

Class.	White.	Colored.	Total.
Isthmian Canal Commission employees..	13,261	9,102	22,363
Nonemployees.....	475	162	637
Total.....	13,736	9,264	23,000

## SICK CAMP REPORT.

Remaining end of 1906.....	15
Admitted and excused for quarters.....	3,650
Died.....	0
Discharged.....	3,040
Transferred.....	605
Remaining end of 1907.....	20
Average daily number constantly sick in camp and quarters:	
White (7 months of year).....	7.91
Colored (7 months of year).....	12.86
Total for year.....	21.08

## REPORT OF TABOGA SANITARIUM.

[Full report of number of patients treated during the year appears under table  
"Consolidated Hospital Report."]

Average number of days treatment per patient .....	4.86
Average number of white employees constantly sick for the year.....	38.45
Average cost of subsistence per patient per day .....	\$0.627

## REPORT OF SANTO TOMAS HOSPITAL.

## PATIENTS TREATED.

Class.	Re- main- ing from 1906.	Ad- mitted.	Dis- charged.	Died.	Re- main- ing end of 1907.
Isthmian Canal Commission employees..	0	11	11	0	0
Nonemployees.....	166	4,161	3,814	322	187
Total.....	166	4,172	3,829	322	187

Average number of Commission employees constantly sick..	0.08
Average number of nonemployees constantly sick.....	169
Average number of days treatment per patient.....	10.20
Average cost of subsistence,* per patient, per day (silver)...	\$0.62

## OPERATIONS.

Major operations.....	461
Minor operations.....	434

## DISPENSARY REPORT.

Class.	White.	Colored.	Total.
Natives.....	182	821	1,003
Foreigners.....	121	419	540
Total.....	303	1,240	1,543

## REPORT OF PEDRO MIGUEL DISPENSARY.

Class.	White.	Colored.	Total.
Employees.....	6,019	3,740	9,759
Nonemployees.....	528	325	853
Total.....	6,547	4,065	10,612

## SICK CAMP REPORT.

Remaining end of 1906.....	16
Admitted and excused for quarters.....	1,691
Died.....	1
Discharged.....	1,461
Transferred.....	232
Remaining end of 1907.....	13
Average daily number constantly sick in camp and quarters:	
White (9 months of year).....	7.30
Black (9 months of year).....	2.99
Total for year.....	9.52



REPORT OF PANAMA DISPENSARY.<sup>a</sup>

Class.	White.	Black.	Total.
Employees.....	3, 894	3, 432	7, 326
Nonemployees .....	372	118	490
Total.....	4, 266	3, 550	7, 816

<sup>a</sup> Name changed to Tivoli Dispensary and removed to Ancon July, 1907.

## SICK CAMP REPORT.

Remaining end of 1906.....	0
Admitted and excused for quarters.....	2, 303
Died.....	0
Discharged.....	2, 175
Transferred.....	127
Remaining end of 1907.....	1
Average daily number constantly sick in camp and quarters:	
White (last 7 months of year).....	3. 32
Black (last 7 months of year).....	3. 91
Total for year.....	6. 15

## REPORT OF LA BOCA DISPENSARY.

Class.	White.	Black.	Total.
Employees.....	10, 859	9, 642	20, 501
Nonemployees.....	594	559	1, 153
Total.....	11, 453	10, 201	21, 654

## SICK CAMP REPORT.

Remaining end of 1906.....	0
Admitted and excused for quarters.....	3, 975
Died.....	0
Discharged.....	3, 760
Transferred.....	202
Remaining end of 1907.....	13
Average daily number constantly sick in camp and quarters:	
White (for 7 months of year).....	8. 69
Black (for 7 months of year).....	5. 49
Total for year.....	10. 92

## REPORT OF SAN PABLO DISPENSARY.

[Opened November 16, 1907.]

Class.	White.	Colored.	Total.
Employees.....	915	1, 009	1, 924
Nonemployees.....	8	89	97
Total.....	923	1, 098	2, 021

## SICK CAMP REPORT.

Admitted and excused.....	127
Died.....	0
Discharged.....	109
Transferred.....	16
Remaining end of 1907.....	2
Average daily number constantly sick in camp and quarters:	
White (for 2 months operated).....	. 91
Black (for 2 months operated).....	1. 55
Total (for 2 months operated).....	2. 47

## REPORT OF COROZAL DISPENSARY.

Class.	White.	Colored.	Total.
Employees.....	6, 061	4, 156	10, 217
Nonemployees.....	553	244	797
Total.....	6, 614	4, 400	11, 014

## SICK CAMP REPORT.

Remaining end of 1906.....	3
Admitted and excused.....	1, 659
Died.....	0
Discharged.....	1, 264
Transferred.....	396
Remaining end of 1907.....	2
Average daily number constantly sick in camp and quarters:	
White (8 months of year).....	2. 81
Black (8 months of year).....	1. 75
Total for year.....	5. 01

## REPORT OF CRISTOBAL DISPENSARY.

Class.	White.	Colored.	Total.
Employees.....	9,040	9,941	18,981
Nonemployees.....	2,230	916	3,146
Total.....	11,270	10,857	22,127

## SICK CAMP REPORT.

Remaining end of 1906.....	8
Admitted and excused for quarters.....	1,033
Died.....	0
Discharged.....	860
Transferred.....	174
Remaining end of 1907.....	7
Average daily number constantly sick in camp and quarters:	
White (8 months of year).....	3.00
Black (8 months of year).....	9.08
Total for year.....	10.18

## REPORT OF TABERNILLA DISPENSARY.

Class.	White.	Colored.	Total.
Employees.....	4,977	14,906	19,883
Nonemployees.....	106	250	356
Total.....	5,083	15,156	20,239

## SICK CAMP REPORT.

Remaining end of 1906.....	7
Admitted and excused for quarters.....	3,162
Died.....	2
Discharged.....	2,361
Transferred.....	788
Remaining end of 1907.....	18
Average daily number constantly sick in camp and quarters:	
White (for 9 months of year).....	4.42
Black (for 9 months of year).....	11.13
Total for year.....	14.69

## REPORT OF THE BOARD OF HEALTH LABORATORY.

Bacteriological examinations of the municipal water supplies.....	366
Bacteriological examinations of carbonated soda waters.....	29
Bacteriological examinations of condensed milk.....	2
Various bacteriological examinations of water.....	137
Various bacteriological examinations.....	11
Bacteriological examinations of water from condensers.....	95
Bacteriological examinations of water from Rio Grande (special).....	18
Analyses of milk.....	4
Sanitary analyses of water.....	42
Chemical analyses:	
Of cows' milk.....	8
Of malted milk.....	4
Of rock.....	2
Of evaporated milk.....	3
Of condensed milk.....	7
Of soap.....	1
Of lard oil.....	20
Of turpentine.....	12
Various chemical analyses.....	13
Chemical examination of urine.....	1
Toxicological examinations.....	6
Post-mortem examination of calf.....	1
Examination of mineral oils.....	1
Examination of cows for tuberculosis.....	6
Examinations of stools.....	9
Examinations of urine.....	35
Examinations:	
Of stomach contents.....	8
Of cows' milk.....	7
Of blood.....	8
Of sputum.....	5
Of blood cultures.....	80
Of exudates.....	32
Examination of mosquito.....	1
Examinations:	
Of pus.....	9
Of leper suspects.....	27
Of tissues.....	13
Of tissue and neoplasms.....	146
Various.....	35
Of water filter, bacteriological.....	1
Microscopical examinations of water.....	2

Assay:	
Of quinine sulphate.....	1
Of graphite.....	1
Of alum.....	2
Of sodium salicylate.....	2
Of hydrocyanic acid.....	1
Of formaldehyde.....	1
Autopsies.....	562
Celloidin sections cut.....	3, 795
Frozen sections cut.....	37
Agglutination reactions.....	1, 896
Bodies embalmed.....	18
Determination of chlorine in water.....	470
Total solids in water.....	15
Determination of chlorine in carbonated soda water.....	1
Determinations of urine in water.....	7

## REPORT OF VACCINATIONS.

Panama.....	3, 694
Colon.....	163
Taboga.....	169
Culebra.....	93
La Boca.....	100
Pedro Miguel.....	54
Gorgona.....	771
Mamei and Juan Grande.....	237
Corozal.....	68
Paraiso.....	52
Matachin.....	240
Empire.....	492
Las Cascadas.....	96
Ancon.....	330
Las Sabanas.....	56
Gatun.....	148
Tabernilla.....	40
San Pablo.....	21
Total.....	6, 824
Vaccinations by quarantine officials at ports of Colon and Panama, and vaccinations at ports of departure or en route.....	45, 712
Total vaccinations.....	52, 536

## STATEMENT OF ISSUES OF QUININE.

[Kilo=2.2046 pounds avoirdupois.]

Total issues (1907).	Kilograms.	Pounds avoirdupois.
January.....	148.250	342.297
February.....	17.775	38.883
March.....	35.100	76.780
April.....	110.475	241.663
May.....	209.900	459.151
June.....	54.600	157.000
July.....	15.157	33.157
August.....	137.000	299.688
September.....	86.444	189.971
October.....	269.551	589.643
November.....	134.887	295.065
December.....	17.251	37.737
Total.....	1,236.390	2,761.035
Average issue per month.....	103.032	230.086

SUMMARY OF THE WORK PERFORMED IN THE CITY OF PANAMA  
DURING THE YEAR.*Street cleaning and garbage collection:*

Daily average number of men at work.....	53
Daily average number of carts at work.....	19
Daily average number of loads of garbage removed.....	78
Daily average number of loads of sweepings removed.....	24
Total number of loads of garbage removed.....	18,837
Total number of loads of sweepings removed.....	6,549
Catch-basins disinfected (119).....times..	200
Times sprinklers were used.....	135
Water used by sprinklers.....gallons..	2,375.509
Times street sweeping machine was used.....	52

*Inspection of yards:*

Houses inspected, good condition.....	6,889
Houses inspected, bad condition.....	2,654
Houses with water connection.....	17,829
Houses with no water connection.....	5,296
Houses with sewer connection.....	17,093
Houses with no sewer connection.....	6,274



*Inspection of yards—Continued.*

Traps in yards connected with sewer.....	14, 605
Traps not connected with sewer.....	2, 663
Water-closets, good condition.....	17, 410
Water-closets, bad condition.....	4, 276
Yards with drainage, good.....	15, 667
Yards with drainage, bad.....	4, 189
Wells on premises.....	832
Tanks on premises.....	155
Persons notified as to unsanitary condition of yards.	4, 825
Persons fined for unsanitary condition of yards by local authorities.....	24
Places where mosquito larvæ were found.....	4, 256
Persons warned for having mosquito larvæ.....	3, 528
Persons fined by local authorities for having mos- quito larvæ.....	36
Persons notified to keep their premises in good sanitary condition and to connect with water and sewer.....	514
Number of water containers destroyed.....	7, 842
<i>Anopheles brigade:</i>	
Number of linear feet of ditches cleaned.....	498, 474
Number of linear feet of ditches dug.....	12, 955
Number of linear feet of cement laid.....	701
Number of square feet of reeds and grass cut.....	1, 265, 521
Number of holes filled.....	984
Number of wells filled.....	365
Number of ponds filled.....	1
Number of cesspools filled.....	3
Number of cubic yards of earth used.....	9, 111
Number of closets oiled.....	201
Number of drains oiled.....	30
Number of pools oiled.....	22, 677
Number of sewers oiled.....	17
Number of trenches oiled.....	1, 739
Number of cesspools oiled.....	145
Number of tanks oiled.....	7
Number of traps oiled.....	2
Number of wells oiled.....	68
Number of yards oiled.....	1, 235
Mosquito oil used for oiling wells and pools.gallons..	424
Chlorine of lime used.....pounds..	340
Carbolic acid used.....do.....	2
Loads of refuse removed from the city.....	1, 348
Daily average number of carts at work.....	7
Number of days carts worked.....	291

*Tank and gutter removal:*

Maximum number of men at work.....	7
Number of tanks removed.....	94
Number of barrels removed.....	8
Total capacity of tanks removed.....gallons..	195, 569
Number of gutters removed.....	3
Total length of gutters removed.....feet..	106

*Disinfection brigade:*

Number of houses disinfected.....	237
Number of houses demolished.....	32
Number of houses fumigated.....	303
Number of rooms fumigated.....	1, 612
Number of cubic feet fumigated.....	5, 213, 707

*Material used—*

Alcohol.....gallons..	91
Bichloride of mercury.....pounds..	17
Formaldehyde.....gallons..	31
Flour.....barrels..	22
Matches.....packages..	16
Manila paper.....feet..	500
Newspaper.....bundles..	47
Tacks.....packages..	34
Pyrethrum.....pounds..	884
Chloride of lime.....do....	1, 030
Sulphur.....do....	10, 131

*Sick inspection:*

Number of hotels and boarding houses inspected (twice daily).....	336
Number of persons reported ill.....	133
Urinary analyses made (negative).....	36

*New buildings:*

Number of plans submitted to the health officer and approved.....	147
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## SUMMARY OF THE SANITARY WORK PERFORMED IN THE CITIES OF COLON AND CRISTOBAL.

[Including Mount Hope, Gatun, and Porto Bello.]

*Medical inspection:*

Cases reported by Colon medical inspectors.....	1, 889
Cases inspected by health office physician <sup>a</sup> .....	1, 381
Cases sent to Colon Hospital.....	75
Cases sent to Cristobal Dispensary.....	491
White employees reported to health officer.....	312

<sup>a</sup> Beginning the 1st of October only suspicious or serious cases were visited by health office physician.

*Medical inspection—Continued.*

White employees inspected by health office physician.....	330
White employees sent to hospital.....	1
Cases of smallpox reported.....	6
Number of smallpox suspects reported.....	1
Number of deaths from smallpox.....	1
<i>Quinine (prophylactic) dispensed to laborers:</i>	
Total number of tablets, 3-grain, dispensed.....	253, 948
Total number of tablets, 5-grain, dispensed.....	124, 576
Total number of doses dispensed.....	291, 439
Total doses (ounces), 5-gr. oz. dispensed.....	90, 182
Average number of doses of tablets dispensed daily.....	825
Average number of doses of solution dispensed daily.....	469

*Sanitation of Colon:*

Number of cans of garbage removed.....	467, 412
Number of loads of yard garbage removed.....	1, 793
Number of cans of night soil removed.....	611, 883
Number of loads to and from storehouse.....	289
Number of miscellaneous loads carted.....	993
Number of water-closets built.....	37
Loads of dirt carted.....	7
Number of yards inspected.....	583
Number of yards cleaned.....	162
Number of night-soil cans installed.....	438
Number of night-soil cans removed.....	343
Number of nuisances reported.....	1, 327
Number of nuisances abated.....	712
Number of blocks of street cleaned.....	540
Number of linear feet of drain cleaned.....	1, 474, 948
Number of cars of dirt unloaded.....	4, 079
Number of square yards of dirt leveled on canal.....	400
Number of square yards of street cleaned.....	5, 391, 753
Number of feet of track cleaned.....	80, 000
Number of tanks removed.....	152
Number of tanks remaining.....	21
Number of square yards of surface cleaned at hospital.....	924
Number of private lots cleaned.....	282
Square yards of land cleared and leveled.....	1, 550
Post holes dug and posts erected.....	27
Number of square yards of vegetation piled and burned.....	279, 777
Square yards of street sprinkled.....	6, 666, 630

*Drainage of Colon:*

Number of feet of drains cleaned.....	219, 862
Number of feet of new drains made.....	422

*Plumbing at Colon:*

Total number of houses in which plumbing was installed.....	81
Number of houses remaining without plumbing..	357

*Fumigation of Colon:*

Number of houses fumigated.....	3
Number of cubic feet fumigated.....	106, 780

*Stegomyia Mosquito Brigade, Colon:*

Square yards of vegetation removed.....	1, 999, 499
Square yards of vegetation piled.....	195, 275
Number of water receptacles overturned.....	37, 878
Number of water receptacles collected.....	465, 572
Number of barrels spigoted.....	652
Number of barrels covered.....	1, 244
Number of tanks oiled.....	418
Number of water-closets oiled.....	1, 880
Number of pools oiled.....	11, 986
Square yards of pools oiled.....	54, 855
Number of sags removed.....	714
Total number of breeding places eradicated.....	3, 140
Barrels destroyed.....	6, 929
Square yards of lagoon cleaned.....	698, 495
Square yards of grading.....	800
Number of barrels oiled.....	941
Number of linear feet of drain cleaned.....	1, 007, 694
Number of feet of drains made.....	1, 340
Number of feet of guttering removed.....	3, 980
Number of tanks removed.....	15
Number of crab holes worked.....	5, 243
Number of crabs killed.....	1, 270
Number of cars of dirt received.....	205

*Sanitation of Cristobal:*

Number of cans of garbage removed.....	126, 469
Number of loads of yard garbage carted.....	6, 878
Number of cans of night soil removed.....	100, 117
Number of loads to and from storehouse.....	49
Number of miscellaneous loads carted.....	417
Number of loads of dirt carted.....	637
Number of night-soil cans installed.....	47
Square yards of street sprinkled.....	146, 000
Number of nuisances reported.....	3
Number of nuisances abated.....	3
Tanks removed.....	1
Number of square yards of street cleaned.....	4, 129, 621

*Fumigation of Cristobal:*

Number of houses fumigated.....	66
Number of cubic feet fumigated.....	1, 947, 376

*Stegomyia Mosquito Brigade, Cristobal:*

Number of square yards of vegetation removed . . .	675, 868
Number of water receptacles collected . . . . .	101, 664
Number of water receptacles overturned . . . . .	5, 524
Square yards of lagoon cleaned . . . . .	1, 227
Number of barrels oiled . . . . .	65
Number of barrels covered . . . . .	45
Number of tanks oiled . . . . .	312
Number of tanks covered . . . . .	52
Number of tanks removed . . . . .	70
Number of tanks cleaned . . . . .	8
Number of pools oiled . . . . .	5, 815
Square yards of pools oiled . . . . .	22, 971
Number of crab holes worked . . . . .	43, 283
Number of crab holes oiled . . . . .	88, 591
Number of crabs killed . . . . .	14, 690
Number of feet of drains oiled . . . . .	4, 525
Number of feet of drain cleaned . . . . .	782, 055
Number of feet of new drains made . . . . .	1, 702
Total number of breeding places eradicated . . . . .	1, 787
Square yards of street cleaned . . . . .	133, 100
Number of feet of gutters cleaned . . . . .	674, 292

*Drainage of Cristobal:*

Number of feet of drains made . . . . .	3, 702
Number of feet of drains cleaned . . . . .	270, 877

*Sanitation of Brazos Camp:*

Number of cans of night soil removed . . . . .	490
Number of cans of garbage removed . . . . .	236
Square yards of vegetation removed . . . . .	55, 000

*Stegomyia Mosquito Brigade, Brazos Camp:*

Number of water receptacles overturned . . . . .	89
Number of water receptacles collected . . . . .	285

*Sanitation of Mount Hope:*

Number of cans of garbage removed . . . . .	23, 859
Number of loads of yard garbage removed . . . . .	193
Number of cans of night soil removed . . . . .	25, 163
Number of square yards of underbrush removed . . . . .	782, 096
Number of square yards of vegetation removed . . . . .	534, 876
Number of miscellaneous loads carted . . . . .	1, 061
Number of night-soil cans installed . . . . .	1
Number of nuisances reported . . . . .	102
Number of nuisances abated . . . . .	102
Square yards of street cleaned . . . . .	36, 151
Linear feet of drains cleaned . . . . .	558
Number of square yards of lagoon cleaned . . . . .	1, 751
Number of square yards of yards cleaned . . . . .	1, 572



*Drainage of Mount Hope:*

Number of feet of drainage made.....	540
Number of feet of drains cleaned.....	66

*Stegomyia Mosquito Brigade, Mount Hope:*

Number of water receptacles overturned .....	40, 919
Number of water receptacles collected.....	70, 999
Square yards of vegetation removed.....	2, 276, 014
Number of barrels spigoted.....	76
Number of barrels oiled.....	302
Number of barrels covered.....	570
Number of tanks oiled.....	5, 942
Square yards of pools oiled.....	475, 356
Square yards of streets cleaned.....	6, 600
Number of notices served to abate nuisances.....	11
Number complied with.....	8
Number fined by alcalde for noncompliance .....	3
Total number of breeding places eradicated .....	1, 668
Number of linear feet of drains cleaned.....	16, 263
Number of feet of drains made.....	14, 560
Square yards of lagoon oiled.....	37, 309
Square yards of lagoon cleaned and filled .....	5, 896

*Sanitation of Mount Hope Cemetery:*

Square yards of vegetation removed .....	524, 647
Square yards of underbrush removed .....	46, 427
Number of linear feet of drains cleaned.....	2, 560
Number of feet of drains made.....	346
Number of interments.....	924
Number reinterred .....	15
Number disinterred.....	50
Number of graves lined and dug.....	863
Number of graves lined.....	219
Number of graves lined and graded.....	183
Number of graves graded.....	80
Stumps removed.....	76
Square yards of swamp filled.....	35

*Sanitation of Gatun:*

Number of cans of garbage removed.....	10, 418
Number of cans of night soil carted.....	5, 444
Number of nuisances abated.....	2
Number of nuisances reported.....	2
Number of latrines dug.....	2
Loads of yard garbage carted .....	18
Number of water-closets built.....	3
Square yards of vegetation removed.....	97, 100
Linear feet of drains cleaned.....	6, 925

*Stegomyia Mosquito Brigade, Gatun:*

Square yards of vegetation removed.....	306, 015
Number of water receptacles collected.....	2, 724



*Stegomyia Mosquito Brigade, Gatun—Continued.*

Number of water receptacles overturned.....	26
Number of linear feet of drains cleaned.....	47, 029
Number of linear feet of drains made.....	200
Number of hours work cleaning around camp and quarters.....	1, 100
Number of hours clearing and burning brush.....	3, 650
Number of barrels covered.....	70
Number of barrels spigoted.....	5
Number of tanks covered.....	10

*Sanitation of Gatun Cemetery:*

Number of interments.....	13
Number of cans of garbage removed.....	2, 476
Number of cans of night soil removed.....	1, 104
Number of new closets built.....	2

*Drainage of Gatun:*

Number of linear feet of drains made.....	5, 750
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*Sanitation of Porto Bello:*

Number of cans of garbage removed.....	233
Number of loads of yard garbage carted.....	40
Square yards of vegetation removed.....	11, 810
Number of crab holes worked.....	3, 465
Number of crabs killed.....	1, 168
Number of linear feet of drains cleaned.....	2, 440
Number of square yards of pools oiled.....	989
Number of feet of new drains made.....	1, 814
Number of water receptacles overturned.....	3
Number of breeding places eradicated.....	420

*Miscellaneous work:*

Number of persons arrested for violating sanitary regulations.....	16
Number of notices served on property owners in Colon to abate nuisances.....	199
Number of notices complied with.....	127
Number of persons fined for violating sanitary regulations.....	21

SUMMARY OF THE ROUTINE WORK ACCOMPLISHED BY THE DE-  
PARTMENT OF SANITATION IN THE CANAL ZONE FOR THE YEAR  
1907.

## ANCON.

Brush cut and removed.....square yards..	980, 281
Swamp filled in.....do.....	55, 993
Swamp drained.....do.....	8, 270
Grass cut and burned.....do.....	1, 110, 666
New ditches dug.....linear feet..	16, 512
Tile drain laid.....do.....	13, 535
New ditches stoned and cemented.....do.....	16, 945

Old ditches stoned and cemented .....	linear feet..	8
Old ditches cleaned and graded.....	do....	132, 927
Closet pits dug (3).....	cubic yards..	32
Closet pits filled in (7).....	do....	90
Closets erected.....		35
Closets cared for.....	daily..	45
Garbage cans emptied.....	do....	78
Night-soil cans emptied.....	do....	98
Houses disinfected.....		12
Houses fumigated (7).....	cubic feet..	134, 134
Metallic screen repaired.....	houses..	33

## LA BOCA.

Brush cut and removed.....	square yards..	678, 278
Swamp filled in.....	do....	10, 471
Swamp drained.....	do....	1, 807
Ponds drained.....	do....	64
Grass cut and burned.....	do....	1, 226, 152
New ditches dug.....	linear feet..	16, 528
Tile drain laid.....	do....	2, 334
New ditches stoned and cemented.....	do....	2, 292
Old ditches stoned and cemented.....	do....	336
Old ditches cleaned and graded.....	do....	98, 060
Closet pits dug (14).....	cubic yards..	347
Closet pits filled in (4).....	do....	34
Closets erected.....		14
Closets cared for.....	daily..	18
Garbage cans emptied.....	do....	166
Night-soil cans emptied.....	do....	80
Houses disinfected.....		27
Houses fumigated (32).....	cubic feet..	1, 028, 563
Metallic screen repaired.....	houses..	6

## COROZAL.

Brush cut and removed.....	square yards..	1, 854, 114
Swamp filled in.....	do....	8, 161
Swamp drained.....	do....	31, 020
Ponds drained.....	do....	27, 770
Grass cut and burned.....	do....	1, 384, 781
New ditches dug.....	linear feet..	20, 397
Tile drain laid.....	do....	6, 717
Old ditches cleaned and graded.....	do....	305, 002
Closet pits dug (23).....	cubic yards..	149
Closet pits filled in (13).....	do....	83
Closets erected.....		19
Closets cared for.....	daily..	33
Garbage cans emptied.....	do....	81
Night-soil cans emptied.....	do....	15

Houses disinfected.....	8
Houses fumigated (31).....cubic feet..	1, 222, 788
Metallic screen repaired.....houses..	65

## MIRAFLORES.

Brush cut and removed.....square yards..	60, 506
Swamp drained.....do.....	3, 014
Ponds drained.....do.....	5, 475
Grass cut and burned.....do.....	134, 956
New ditches dug.....linear feet..	684
Old ditches cleaned and graded.....do.....	55, 536
Closet pits dug (8).....cubic yards..	296
Closet pits filled in (6).....do.....	42
Closets erected.....	17
Closets cared for.....daily..	12
Garbage cans emptied.....do.....	48
Night soil cans emptied.....do.....	42
Houses disinfected.....	3
Houses fumigated (2).....cubic feet..	40, 000

## PEDRO MIGUEL.

Brush cut and removed.....square yards..	994, 194
Swamp filled in.....do.....	16, 983
Swamp drained.....do.....	15, 660
Ponds drained.....do.....	17, 160
Grass cut and burned.....do.....	429, 426
New ditches dug.....linear feet..	16, 801
Tile drain laid.....do.....	8, 244
New ditches stoned and cemented.....do.....	493
Old ditches stoned and cemented.....do.....	1, 997
Old ditches cleaned and graded.....do.....	73, 931
Closet pits dug (19).....cubic yards..	133
Closet pits filled in (9).....do.....	105
Closets erected.....	59
Closets cared for.....daily..	82
Garbage cans emptied.....do.....	170
Night-soil cans emptied.....do.....	87
Houses disinfected.....	24
Houses fumigated (18).....cubic feet..	309, 246
Metallic screen repaired.....houses..	32

## PARAISO.

Brush cut and removed.....square yards..	425, 006
Swamp filled in.....do.....	74
Swamp drained.....do.....	1, 200
Ponds drained.....do.....	50
Grass cut and burned.....do.....	1, 466, 015

New ditches dug.....	linear feet..	23, 583
Tile drain laid.....	do.....	5, 154
New ditches stoned and cemented.....	do.....	1, 167
Old ditches stoned and cemented.....	do.....	3, 305
Old ditches cleaned and graded.....	do.....	121, 553
Closet pits dug (20).....	cubic yards..	158
Closet pits filled in (19).....	do.....	53
Closets erected.....		9
Closets cared for.....	daily.....	75
Garbage cans emptied.....	do.....	174
Night-soil cans emptied.....	do.....	69
Houses disinfected.....		11
Houses fumigated (16).....	cubic feet..	228, 241
Metallic screen repaired.....	houses.....	74

## CUCARACHA.

Brush cut and removed.....	square yards..	117, 714
Swamp filled in.....	do.....	79, 650
Swamp drained.....	do.....	107
Ponds drained.....	do.....	204
Grass cut and removed.....	do.....	165, 141
New ditches dug.....	linear feet..	14, 726
New ditches stoned and cemented.....	do.....	729
Old ditches stoned and cemented.....	do.....	606
Old ditches cleaned and graded.....	do.....	119, 311
Closet pits dug (13).....	cubic yards..	50
Closet pits filled in (12).....	do.....	25
Closets erected.....		12
Closets cared for.....	daily.....	19
Garbage cans emptied.....	do.....	49
Night-soil cans emptied.....	do.....	2
Houses disinfected.....		3
Houses fumigated (13).....	cubic feet..	86, 450

## CULEBRA.

Brush cut and removed.....	square yards..	1, 924, 625
Swamp filled in.....	do.....	32
Swamp drained.....	do.....	810
Ponds drained.....	do.....	468
Grass cut and burned.....	do.....	2, 127, 882
New ditches dug.....	linear feet..	31, 185
Tile drain laid.....	do.....	15, 121
New ditches stoned and cemented.....	do.....	387
Old ditches stoned and cemented.....	do.....	390
Old ditches cleaned and graded.....	do.....	195, 306
Closet pits dug (35).....	cubic yards..	173
Closets filled in (29).....	do.....	46
Closets erected.....		8

Closets cared for.....	daily..	66
Garbage cans emptied.....	do....	583
Nights-oil cans emptied.....	do....	112
Houses disinfected.....		98
Houses fumigated (312).....	cubic feet..	2, 249, 785
Metallic screen repaired.....	houses..	126

## EMPIRE.

Brush cut and removed.....	square yards..	205, 785
Swamp filled in.....	do....	20, 456
Swamp drained.....	do....	102, 108
Ponds drained.....	do....	12, 921
Grass cut and burned.....	do....	5, 190, 129
New ditches dug.....	linear feet..	25, 736
Tile drain laid.....	do....	17, 683
New ditches stoned and cemented.....	do....	78
Old ditches stoned and cemented.....	do....	200
Old ditches cleaned and graded.....	do....	297, 775
Closet pits dug (112).....	cubic yards..	1, 091
Closet pits filled in (74).....	do....	380
Closets erected.....		84
Closets cared for.....	daily..	133
Garbage cans emptied.....	do....	642
Night-soil cans emptied.....	do....	152
Houses disinfected.....		40
Houses fumigated (34).....	cubic feet..	517, 597
Metallic screen repaired.....	houses..	80

## LAS CASCADAS.

Brush cut and removed.....	square yards..	181, 374
Swamp filled in.....	do....	633
Swamp drained.....	do....	29, 495
Grass cut and burned.....	do....	1, 837, 729
New ditches dug.....	linear feet..	33, 014
Tile drain laid.....	do....	1, 707
New ditches stoned and cemented.....	do....	4, 384
Old ditches stoned and cemented.....	do....	1, 744
Old ditches cleaned and graded.....	do....	155, 971
Closet pits dug (53).....	cubic yards..	543
Closet pits filled in (37).....	do....	142
Closets erected.....		31
Closets cared for.....	daily..	67
Garbage cans emptied.....	do....	329
Night-soil cans emptied.....	do....	91
Houses disinfected.....		23
Houses fumigated (22).....	cubic feet..	321, 876
Metallic screen repaired.....	houses..	87



## BAS OBISPO.

Brush cut and removed.....	square yards..	224, 775
Swamp filled in.....	do.....	2, 149
Ponds drained.....	do.....	120
Grass cut and burned.....	do.....	3, 636, 676
New ditches dug.....	linear feet..	6, 906
Tile drain laid.....	do.....	533
New ditches stoned and cemented.....	do.....	186
Old ditches cleaned and graded.....	do.....	95, 271
Closet pits dug (149).....	cubic yards..	500
Closet pits filled in (112).....	do.....	476
Closets erected.....	do.....	50
Closets cared for.....	daily..	81
Garbage cans emptied.....	do.....	193
Night-soil cans emptied.....	do.....	8
Houses disinfected.....	do.....	14
Houses fumigated (40).....	cubic feet..	951, 582
Metallic screen repaired.....	houses..	52

## MATACHIN.

Brush cut and removed.....	square yards..	49, 401
Swamp filled in.....	do.....	273
Swamp drained.....	do.....	266
Grass cut and burned.....	do.....	115, 247
New ditches dug.....	linear feet..	14, 372
Tile drain laid.....	do.....	206
Old ditches cleaned and graded.....	do.....	36, 488
Closet pits dug (20).....	cubic yards..	144
Closet pits filled in (31).....	do.....	177
Closets erected.....	do.....	34
Closets cared for.....	daily..	37
Garbage cans emptied.....	do.....	68
Night-soil cans emptied.....	do.....	19
Metallic screen repaired.....	houses..	6

## GORGONA

Brush cut and removed.....	square yards..	3, 035, 500
Swamp filled in.....	do.....	5, 774
Swamp drained.....	do.....	3, 459
Ponds drained.....	do.....	166
Grass cut and burned.....	do.....	6, 696, 328
New ditches dug.....	linear feet..	19, 789
Tile drain laid.....	do.....	4, 786
New ditches stoned and cemented.....	do.....	91
Old ditches stoned and cemented.....	do.....	130
Old ditches cleaned and graded.....	do.....	55, 458



Closet pits dug (52).....	cubic yards..	316
Closet pits filled in (24).....	do.....	126
Closets erected.....		116
Closets cared for.....	daily..	111
Garbage cans emptied.....	do.....	302
Night-soil cans emptied.....	do.....	148
Houses disinfected.....		64
Houses fumigated (65).....	cubic feet..	982, 741
Metallic screen repaired.....	houses..	53

## SAN PABLO.

Brush cut and removed.....	square yards..	189, 274
Swamp filled in.....	do.....	1, 523
Ponds drained.....	do.....	1, 560
Grass burned.....	do.....	716, 059
New ditches dug.....	linear feet..	13, 990
Tile drain laid.....	do.....	93
Old ditches cleaned and graded.....	do.....	37, 112
Closet pits dug (64).....	cubic yards..	164
Closet pits filled in (25).....	do.....	51
Closets erected.....		43
Closets cared for.....	daily..	19
Garbage cans emptied.....	do.....	48
Night-soil cans emptied.....	do.....	7
Houses disinfected.....		1
Houses fumigated (18).....	cubic feet..	227, 035
Metallic screen repaired.....	houses..	8

## TABERNILLA.

Brush cut and removed.....	square yards..	474, 043
Swamp filled in.....	do.....	1, 661
Ponds drained.....	do.....	230
Grass cut and burned.....	do.....	3, 415, 570
New ditches dug.....	linear feet..	28, 846
Tile drain laid.....	do.....	15, 065
Old ditches cleaned and graded.....	do.....	129, 885
Closet pits dug (95).....	cubic yards..	446
Closet pits filled in (64).....	do.....	136
Closets erected.....		48
Closets cared for.....	daily..	54
Garbage cans emptied.....	do.....	149
Night-soil cans emptied.....	do.....	46
Houses disinfected.....		66
Houses fumigated (71).....	cubic feet..	3, 143, 766
Metallic screen repaired.....	houses..	7

## BOHIO.

Brush cut and removed.....	square yards..	3, 130
Swamp filled in.....	do.....	150
Grass cut and burned.....	do.....	75, 320
Old ditches cleaned and graded.....	linear feet..	42, 591
Closet pits dug (39).....	cubic yards..	171
Closet pits filled in (8).....	do.....	39
Closets erected.....	do.....	38
Closets cared for.....	daily..	52
Garbage cans emptied.....	do.....	46
Night-soil cans emptied.....	do.....	13
Houses disinfected.....	do.....	1
Houses fumigated (8).....	cubic feet..	45, 740
Metallic screen repaired.....	houses..	11

## GATUN.

‡For the last eight months..

Brush cut and removed.....	square yards..	632, 535
Swamps filled in.....	do.....	4, 932
Swamps drained.....	do.....	2, 230
Ponds drained.....	do.....	150
Grass cut and burned.....	do.....	1, 180, 940
New ditches dug.....	linear feet..	9, 302
Tile drain laid.....	do.....	19, 263
New ditches stoned and cemented.....	do.....	1, 330
Old ditches cleaned and graded.....	do.....	92, 534
Closet pits dug (104).....	cubic yards..	578
Closet pits filled in (65).....	do.....	291
Closets erected.....	do.....	58
Closets cared for.....	daily..	54
Garbage cans emptied.....	do.....	169
Night soil cans emptied.....	do.....	14
Houses disinfected.....	do.....	11
Houses fumigated (13).....	cubic feet..	179, 020
Metallic screen repaired.....	houses..	87

## RECAPITULATION.

Brush cut and removed.....	square yards..	12, 031, 535
Swamp filled in.....	do.....	208, 913
Swamp drained.....	do.....	189, 446
Ponds drained.....	do.....	66, 338
Grass cut and burned.....	do.....	30, 899, 017
New ditches dug.....	linear feet..	292, 363
Tile drain laid.....	do.....	110, 451
New ditches stoned and cemented.....	do.....	28, 082
Old ditches stoned and cemented.....	do.....	8. 716

Old ditches cleaned and graded.....	linear feet..	2, 044, 711
Closet pits dug (823).....	cubic yards..	5, 291
Closet pits filled in (539).....	do.....	2, 287
Closets erected.....		685
Closets cared for.....	daily.....	958
Garbage cans emptied.....	do.....	3, 295
Night soil cans emptied.....	do.....	1, 007
Houses disinfected.....		406
Houses fumigated (712).....	cubic feet..	11, 678, 564
Metallic screen repaired.....	houses..	727

#### SANITATION—BOCAS DEL TORO.

##### *General cleaning:*

Number of barrels of garbage removed.....	98, 850
Number of square yards of street cleaned.....	652, 000
Loads of yard garbage removed.....	861
Loads of garbage removed from beach.....	47
Maximum number of men at work, average.....	13
Minimum number of men at work, average.....	9
Daily average number of men at work.....	11
Number of loads of sand carted.....	287

##### *Mosquito brigade:*

Square yards of underbrush and grass cut and burned..	174, 500
Number of barrels repaired, old and new.....	669
Number of barrels covered, old and new.....	193
Number of barrels spigoted.....	1, 010
Number of barrels overturned.....	455
Number of barrels destroyed.....	211
Number of barrels oiled.....	11
Number of tanks repaired.....	120
Number of tanks destroyed.....	1
Number of wells oiled.....	107
Number of crab holes worked.....	15, 700
Number of crab holes oiled.....	3, 700
Number of feet of new drains made.....	1, 350
Number of feet of drains cleaned.....	6, 180
Number of hours consumed in oiling.....	1, 330
Number of hours consumed in reinspection of barrels..	663
Number of persons fined.....	69

##### *Material used:*

Wooden faucets.....	614
Spigots.....	423
Copper wire, feet.....	1, 604
Sulphur, pounds.....	274
Pyrethrum.....	56
Chloride of lime, pounds.....	110
Mosquito oil, barrels.....	118
Carbolic acid, barrels.....	1

CONSOLIDATED REPORT OF QUARANTINE TRANSACTIONS AT PORTS  
OF ANCON AND PANAMA, AND COLON AND CRISTOBAL, FOR THE  
YEAR 1907.

Total number of vessels inspected and passed.....	902
Total number of vessels detained in quarantine.....	11
Total number of vessels fumigated on arrival.....	30
Total number of vessels fumigated prior to sailing.....	71
Total number of crew inspected.....	59, 646
Total number of passengers inspected.....	64, 389
Total number of persons inspected.....	124, 035
Total number of persons vaccinated at ports of arrival on account of compulsory vaccination law.....	24, 436
Total number of persons vaccinated at ports of departure or en route on account of compulsory vaccination law..	22, 924
Total number of persons vaccinated on account of com- pulsory vaccination law.....	47, 360
Total number of passengers held in quarantine at the de- tention stations to complete the period of incubation of yellow fever and plague.....	3, 156
Total number of persons held to complete period of incu- bation of smallpox.....	768
Total number of persons held to complete period of incu- bation of smallpox at observation camps.....	423
Total number of persons held on board boats to complete period of incubation of yellow fever and plague.....	669
Total number of persons held to complete period of incu- bation of yellow fever and plague.....	1, 007
Total number of persons held in quarantine on account of impetigo contagiosa.....	16
Total number of passengers landed from foreign ports:	
Cabin.....	18, 297
Steerage.....	36, 438
	54, 735
Total number of passengers embarked for foreign ports:	
Cabin.....	13, 953
Steerage.....	17, 900
	31, 853
Total number of persons arriving from coast towns on launches and small sailing craft.....	16, 699
Total number of persons leaving for coast towns on launches and small sailing craft.....	12, 508
Total apparent increase for the year from foreign ports:	
Cabin.....	4, 344
Steerage.....	18, 538
	22, 882

Total apparent increase for the month from coast towns, steerage (approximate).....	4, 191
Total number of persons landed.....	71, 434
Total number of persons embarked.....	44, 361
Total apparent increase for the year.....	27, 073
Total number of pieces of baggage disinfected.....	1, 852
Total number of immigrants recommended for rejection..	70
Total number of certificates issued to outgoing passengers.	584
Total number of persons refused certificates because of trachoma.....	71
Number of bills of health issued.....	2
Number of bills of health viséed.....	261
Total number of circulars relative to malaria fever, distributed (approximate).....	32, 525

QUARANTINE TRANSACTIONS, BOCAS DEL TORO, FOR THE YEAR 1907.

Number of vessels inspected and passed.....	392
Number of vessels fumigated upon arrival.....	7
Number of vessels fumigated before sailing.....	8
Total number of crew inspected.....	7, 295
Total number of passengers inspected.....	3, 021
Total number of persons vaccinated.....	61
Number of persons held to complete period of incubation for yellow fever.....	198
Total number of vessels entering during the year.....	395
Total number of vessels sailing during the year.....	395

PERSONNEL REPORT.

[Average number of employees per month for the year.]

Office of chief sanitary Officer.....	42	Panama Dispensary <sup>a</sup> .....	3
Office of director of hospitals.....	15	La Boca Dispensary.....	6
Ancon Hospital.....	420	Pedro Miguel Dispensary..	4
Colon Hospital.....	245	Gatun Dispensary.....	13
Culebra Hospital.....	23	Cristobal Dispensary.....	6
Gorgona Hospital.....	14	San Pablo Dispensary....	3
Miraflores Hospital.....	29	Palo Seco Leper Asylum..	6
Empire Hospital.....	12	Property Division, Sanitary Department.....	16
Santo Tomas Hospital....	7	Health office of Panama..	130
Tarbernilla Hospital.....	5	Health office of Colon and Cristobal.....	236
Las Cascadas Hospital...	12	Quarantine Service.....	31
Bas Obispo Hospital.....	13	Zone Sanitation.....	1, 110
Paraiso Hospital.....	12		
Taboga Sanitarium.....	24	Total.....	2, 440
Corozal Dispensary.....	3		

<sup>a</sup> Changed to Tivoli Dispensary July, 1907.



MALARIA CASES AND DEATHS AMONG WHITE AND BLACK EMPLOYEES IN HOSPITALS, SEPARATELY AND CONSOLIDATED, BY MONTHS, FOR THE YEARS 1906 AND 1907.

	Cases treated.		Total.	Deaths.		Total.
	White.	Black.		White.	Black.	
1906.						
January.....	384	1,312	1,696	1	14	15
February.....	395	1,031	1,426	1	11	12
March.....	425	1,141	1,566	1	14	15
April.....	333	801	1,134	0	8	8
May.....	289	830	1,119	0	2	2
June.....	377	1,856	2,233	2	15	17
July.....	721	2,204	2,925	4	23	27
August.....	490	2,148	2,638	0	26	26
September.....	317	1,744	2,061	0	16	16
October.....	450	1,462	1,912	0	26	26
November.....	362	1,029	1,391	1	23	24
December.....	537	1,101	1,638	1	10	11
Total.....	5,080	16,659	21,739	11	188	199
1907.						
January.....	755	1,209	1,964	1	13	14
February.....	692	936	1,628	1	13	14
March.....	646	854	1,500	3	14	17
April.....	365	499	864	2	15	17
May.....	296	319	615	1	5	6
June.....	529	509	1,038	1	8	9
July.....	937	816	1,753	3	18	21
August.....	1,153	1,010	2,163	4	13	17
September.....	1,024	895	1,919	5	8	13
October.....	811	738	1,549	1	8	9
November.....	512	464	976	3	6	9
December.....	351	433	784	2	1	3
Total.....	8,071	8,682	16,753	27	122	149







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